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PATENT ELLIPTIC SCRAPER AND TUBE CLEANER, FOR BOILER AND OTHER TUBES.

(Patented in the United States and Europe.)

This novel and ingenious invention isclaimed to be the cheapest, best, most durable, easiest to adjust, cleanest to use, and most perfect instrument ever offered to the public. Being constructed on simple and mechanical principles, it is not liable to get out of order, and will continue to perform its office until the materials are worn out. It can readily be adjusted, even by any inexperienced person—will scrape off the scales, and cleanse the tubes just as smooth and clean as they were when new, without in the least affecting their inner surface, as the Elliptic Spring Scraper has a smooth square edge, and springs in or out to fit the tubes.

The annexed drawing represents a side view of the Patent Elliptic Scraper and Cleaner.

A is a continuous iron rod, running through the centre of the top and bottom Hubs and Caps B and C.

The soft steel scrapers D, are fastened with screws to the Hubs, under the Caps B and C, which cover and protect the screws that fasten the Scrapers on the Hub.

The Scrapers are expanded or contracted by screwing or unscrewing the Hub B—first loosening the Cap B.

H is a collar on the Rod A, with a set screw in it to fix it firmly on the Rod to prevent the Scraper being jammed.

F is an elastic or flexible Scraper made of leather, rubber, or some similar material, and attached to the nut E, for the purpose of removing from the Tube the scale and dust loosened by the action of the Scrapers D.

Parties sending orders for the Elliptic Scraper, will please to be particular in giving the size of the tube—stating whether the measure is from the *outside* or *inside*.

The manufacturers keep on hand a variety of wire rope, with couplings attached, (necessary for the use of the Scraper where a straight rod cannot be used), which will be furnished at reasonable prices. The following are the rates :—1 inch, $5; 2 inch, $6; 3 inch, $7; 4 inch, $8; 5 inch, $9; 6 inch, $10. Orders by mail will receive prompt and careful attention, by addressing CHRISTOFFEL & BOOTH, 201 Centre street, N. Y.

Fraudulent Reports by Companies.

It has been held by the House of Lords, in the case of Addie vs. The Western Bank of Scotland, that where a shareholder of a company is induced by a fraudulent report to subscribe for additional shares, the misrepresentation is a ground for recision of such a contract, and he is not held as having, as a member of the company, made the false statement to himself. "This conclusion (says the *Solicitor's Journal*) has previously been hinted at, but not authoritatively laid down. The question so much discussed in past years, whether false statements in a report addressed to shareholders will upset a contract entered into by a person who was not previously a shareholder, is still undecided. Lords Westbury, St. Leonard's, and Cranworth have in past times thought that in such a case the purchaser would be entitled to recision. Lord Chelmsford and Lord Justice Turner appear to have held the contrary opinion."—*London Mining Journal.*

The Railroads of the World.

The railroad and the telegraph stand pre-eminent in modern times among the means by which the development of cities and nations, and continents is stimulated in all the departments of material prosperity and productive power. Recently the *Financial Chronicle* published an elaborate table of statistics, showing that Europe has 50,117 miles of railroad, North and South America 40,866 miles, and Asia only 3,660 miles. In the United States there are 36,896 miles—which is about thirty-eight per cent. of the whole mileage of railroads in the world; in Great Britain and Ireland there are 13,286 miles, in France 3,982 miles, and in Prussia 5,794 miles. In the United States there are eighty-one square miles of territory to each mile of railroad, and one mile of railroad to each one thousand of population; in Great Britain and Ireland the proportion is nine miles of area to one of railroad, and one mile of road to each 2,189 of population; and in France the ratio is twenty-four miles to one of railroad, and four thousand one hundred and seventy-two of population to one mile of road. Belgium, with one mile of railroad to every seven miles of territory, has a more thorough network of railroads than any other country; while Russia, with a territory twelve times the extent of the British Isles, has only one-fifth the length of road. Europe has one mile of railroad to each seventy-one miles of territory, and five thousand six hundred and eighty-six of population; and in the whole of North America there is to each mile of road one hundred and ninety-two miles of territory and one thousand three hundred and nine of population. These facts and figures are strikingly suggestive of the various degrees of material development and of the rapid advancement of industrial enterprise throughout the world, and indicate quite conclusively that while railroads as means of material growth have almost reached their full development in the several countries of the old world; in the United States our railroads are extended in a ratio almost equally promotive of growth, while they require and, during the coming ten or twelve years they will probably receive, considerable extension, consolidation and improvement.

CHRISTOFFEL & BOOTH'S PATENT ELLIPIIC SCRAPER AND TUBE CLEANER, FOR BOILER AND OTHER TUBES.

A Collection of Wonders.

A marvellous collection of objects of art and gems is now on private exhibition in Paris. Connoisseurs opine that so large a number of unique and magnificent valuables has never been gathered together in any country; and a Prince, whose taste is as proverbial as his wealth, recently declared that he never even suspected the existence of such marvels. It would be impossible to enumerate the elements of one-fourth of the collection, but we can mention a few of the wonders without attempting to give a satisfactory description of any. First comes a little basket carved out of a single emerald, which is as large as a good-sized apricot. There are portions of the apricot which have been cut through, and other parts have been sculptured *en relief*. It is said that the work on this little basket required an outlay of time equal in duration to the lives of several men. Then the connoisseurs are shown a vase made of a singular turquoise in the form of a goblet, about thirty centimetres in height, and surrounded by a garland of gems. Experienced appraisers who were called upon to estimate the value of this wondrous vase, failed to agree as to the figure, but all admitted that it exceeded 14,000,000 francs. A small boat carved out of jade, and tenanted by two tiny figures—a man and a monkey—made of gems; a cage made of gold and gems containing birds, and a clock of like materials; a drinking cup, cut from a single opal, are next in the order of exhibition. We can only make a general mention of casks filled with unset precious stones, worth from 500,000 to 1,000,000 francs, or forty snuff-boxes of the most magnificent description, and of quantities of bracelets, rings and ear-rings, set with rubies, turquoises, emeralds, sapphires, and diamonds of every color; for an enumeration of all these curiosities would require more space than could be given it. The most singular feature of the exhibition, however, is the simplicity which characterizes the actions of the exhibitor. The gentleman who does the honors of the place allows the visitors to admire, touch and *vitiare* all the valuables displayed, and then throws the entire collection into a broken chest and a wretched bureau drawer, turns the key in a rusted lock, and sallies forth to the restaurant, pending the hour fixed upon by some sovereigns who have promised to view the collection. Thus far no bargain of any magnitude has been made on account of the immense prices that are asked.—*French Paper.*

[We can swallow the apricot, &c., but not that "wretched bureau drawer."—ED. JOUR. OF MINING.]

Mining in Central America—The Javali Mine.

The following information is gleaned from an interesting paper communicated to the *Athenæum* by Dr. Berthold Seeman :—"The stillness of the virgin forests, which to this day cover a great part of Chontales, would probably not have been broken for generations had it not been for the discovery of a very productive gold mine, which, until recently, was the property of a Spanish American, and has now passed into the hands of English capitalists. For many years the first owner had drawn none but blanks in the great lottery of mining enterprise. He had been one of the first settlers at Libertad, a place which derived its name from a grog shop of that name, where everybody had liberty to do pretty much as he liked. One day, when hopelessly embarrassed, a man with the image of St. Peter passed the house, asking whether anybody wished to offer up prayers to the saint. The poorer classes of Nicaragua do not always give money to these wandering image-bearers, but frequently whatever good things they may have in their possession, such as cacao beans, chocolate, lumps of sugar, wax candles, etc.; and the wife of the impoverished miner could lay her hands on nothing better than a piece of scented soap. But she promised to present a chalice to the village church, if St. Peter would let her husband, who had been so singularly unfortunate in gold mining, find a good silver mine. The husband having fully ratified the vow, both awaited with confidence the asked-for intercession. They were not doomed to be disappointed. A short time afterwards an Indian called, and the miner's miserable plight became at once the topic of conversation. "If it is rich stones you are harping after," said the Indian, "I can take you to a place where you shall find enough to last you a lifetime." The offer was gladly accepted, on condition that if the place turned out as rich as represented the Indian should receive three cows for showing it. Chopping-knife in hand, and a few provisions on their back, the two entered the thick virgin forest which stretches from Libertad to the shores of the Atlantic Ocean. After travelling several leagues, they arrived at a place where the Indians were in the habit of shooting javalls, a kind of wild boar. "Will this satisfy you?" asked the guide triumphantly. The miner was dumbfounded. After years of fruitless toil and search, he saw at last before him a property combining all the features of a good mine. On the slopes of a hill rising

500 feet above a river-bed, he found a wide lode of quartz rock, rich in silver and gold, and traceable for several miles; magnificent waterfalls, available for setting in motion the most powerful machinery, and in every direction timber of excellent quality for mining purposes. This was the now famous Javali mine, the ore of which up to that time was taken out in small quantities only, and ground to powder in mortars cut out of the solid rock of the river-bed whenever the Indians required gold for trading purposes. Hastening to register his claims officially, the enraptured miner tried to raise the funds necessary for turning this valuable discovery to account; but his credit was so low that not one of his countrymen would lend him a few dollars to buy picks and shovels. He would have been obliged to abandon all thoughts of working the mine if a generous foreigner had not come forward with the necessary funds, and also stood between him and his relentless creditors, when the richness of the Javali came to be known. In a short time the miner was able to pay off all his and his father's debts, and purchase houses and estates. The chalice promised to St. Peter's shrine was not forgotten. It was made of 36 ozs. of gold, and by the hands of a German goldsmith, under whose hospitable roof the miner was living when his wife registered the vow. The discovery of the Javali, or rather the betrayal of its existence by the Indian, led to the exploration of the surrounding district, and the finding of more than 300 mines of more or less importance. A proper geological survey of this undoubtedly rich district—rich in both silver and gold—has, however, as yet not been attempted, though it might be expected to lead to results which would more than a thousand-fold repay the expenses of such an undertaking. But Nicaragua, like most parts of Spanish America where the foreign element has as yet not penetrated, is so poor that it has no funds for projects of this nature. Though all mines are national property, the discovery and tracing of them out is entirely left to the individual enterprise of people who have acquired a certain amount of empirical geological knowledge, and who, when they find rich spots, make them their own by registering them officially. As long as the mines are worked, and worked properly, the title thus acquired is undisputed; but if for two years no work is done in them, they revert once more to the nation, and may be registered anew. Some of the most important mines of Chontales are now owned by foreigners, who are gradually introducing a better system of working them. The natives still go on mining in the most expensive and primitive manner. Deep shafts they cannot sink, because they do not know how to timber the ground; and not having deep shafts, they cannot avail themselves of even such a simple contrivance as a tackle, and have to carry all the ore on the backs of men in leather bags, fastened by a strap round the forehead. A man carries about a hundredweight at a time, and has to climb up steep trunks of trees, in which notches have been cut. In damp weather these primitive ladders are very slippery, and cause numerous accidents. The ore is ground by water power and in *rastros*, heavy rocks of quartz and basalt being used for crushing. Many of the miners are natives of the neighboring republic of Honduras. They are better workmen than the Nicaraguans, but enjoy the reputation of being greater thieves. In these mountains a species of caoutchouc (known here by its Aztec name of ule), vanilla, sarsaparilla, quassia, fustic and other valuable woods abound, and there are many vegetable productions perfectly new to science. Although the gold regions of Chontales are very close to the Atlantic Ocean, yet there is no direct road between them and the seaboard, and all communication is kept up by American steamers passing up the river San Juan and the Lake of Nicaragua. The Javali lode of auriferous quartz rocks has been seen for several miles, and the various branches distinctly traced (which in many cases have proved extremely rich) running into it. Further on the eye, passing over dense virgin forests, encounters green savannas. The view is bounded on the east by the Blewfield hills, on the west by the Lake of Nicaragua and its characteristic islands. What a capital subject for a geographical paper an exploration of this district would afford! It is truly virgin ground, where here and there you meet a few families of Indians.

The Pantelegraph—Important Discovery in Telegraphing.

A new discovery, due to M. Lambrigot, an official of the Paris Telegraph office, completes M. Casselli's invention in a remarkable manner. Hitherto the pantelegraph could only transmit dispatches from a given point to another with which it was connected by a direct wire. Thus, for instance, the apparatus corresponded between Paris and Marseilles, or Paris and Lyons; but, owing to the interruption of the wire, a dispatch received from Marseilles at Paris could not be transmitted to Strasburg, because the dispatch written in the sender's own hand had been reproduced at Marseilles, and the operation ended there. The words might of course be telegraphed to Strasburg by the ordinary telegraph, but the sender's own autograph could not reach that place. M. Lambrigot's invention remedies this defect. It has already been stated that the dispatch is written by the sender on a metallic paper, with thick ink and a thick pen, and that the copy is reproduced, say at Marseilles, in blue, on a sheet saturated with a solution of cyanide of potassium. M. Lambrigot, in order to send the autograph further, reprints it in the following manner: He applies on the metallic surface a piece of tracing paper, so prepared as to produce Prussian blue by the contact of iron and a voltaic current. He thus obtains a copy of the autograph on the metallic sheet; this done, he passes over it a roller charged with a substance which immediately transforms the Prussian blue into a fatty substance, which will retain printing ink on the writing only, without soiling the rest of the paper. The autograph thus prepared is pressed on another metallic sheet, which receives the writing. A little litharge, a non-conducting substance, is then sprinkled upon the latter, and the autograph may then be transmitted anew. But as it thus comes out reversed, the copy at the other station is executed on thin paper, so that the dispatch may be read on the wrong side or back of the sheet.—*N. Y. Telegrapher.*

Original Papers.

[WRITTEN FOR THE JOURNAL OF MINING.]

A PROGRAMME OF ATOMECHANICS;
Or Chemistry as a Mechanics of the Panatoms.

BY GUSTAVUS HINRICHS,
Professor of Physic, Chemistry and Mineralogy, at the Iowa State University, Chemist of the Geological Survey of Iowa, etc.

(Continued from Page 93.)

SECTION IV., §§. 229-400—THE MORPHOLOGICAL PROPERTIES.

This section of the work gives, for the first time, a strictly *mechanical* *theory of the forms of crystals. It will, therefore, be necessary to not only state, in general, what method I made use of in this investigation, but also to give some of the results obtained in regard to the two most difficult cases, represented by the triple form of titanic acid, and the dimorphism of carbonate of lime.

My *method* is simply that of all modern science, consisting in *successive approximations*. For it will be remembered that this is the method of calculus—of mechanical astronomy†; of mathematical physics‡; it is therefore the only method that can be applied to *mechanical crystallogy*.

As first approximation I consider the atoms of the elements contained in a crystal as *equal* material points; the resulting form is the *normal form* for all compounds having the same general chemical formula. From this the *actual form* is derived by taking into account the deviations of the real atoms from EQUAL material points.

Let the vertical axis of the normal form be equal to a; let the horizontal axes be b=1 and c. Let x, y, z be small quantities depending on the atomic constitution of the elements, as determined in section I; then the actual form of the crystal will have the axes X: Y: Z=a+x: b+z.

The normal form of the elements I call the *Protoid*, because the chemical formula is simply A; see §§. 256-264. The normal form AB is called the *Deutoid*, that of A B_2 C the *Tritoid*, etc; that of A B_3 C the *Detoid* (including the carbonates), that of A B_4 C the *Rhomboid* (including the sulphates).

From this it may already be seen that the six crystallographic systems are rather arbitrary. The scientific value of these systems is discussed in §§ 239-255 by giving a general graphical representation of all crystalline forms by one point properly placed in a plane, by statistical reviews of observed forms, and by forms approaching very much** to another system. Any classification of minerals based upon such arbitrary distinctions is therefore without a solid basis; thus the so-called "*system*" of mineralogy of *Dana* is precisely as natural as the botanical system of *Linnæus*—only not as practical as this latter.

The three material points represented by the three atoms of the *Tritoid A* B_2 (§§ 302 358) form necessarily an equilateral triangle, the rectangular axes of which are b: c=1: $\sqrt{3}$=1: 1.73205. The axis a is determined by the aggregation; hence either a=b or a=c under the restriction of constant volume. The normal form of the tritoid is therefore either *I*=a: b: c=1: 1: 1.73205, or i=a: b: c=1.73205: 1: 1.73205 =1: 0.57735: 1. As examples of observed forms, I give here the numerical values of the deviations x, y, z, for the most difficult mineral, titanic acid:

Tritoid II=1 : 0.57735: 1				Tritoid I=1 : 1 : 1.73205:			
Deviations	x	y	z	Deviations	x	y	z
Zircon	0	+0.0631	0	Quartz	+0.0999	0	0
Rutile	0	+0.0668	0	Anatase	0	0	+0.0451
Cassiterite	0	+0.0950	0	Brookite	+0.0078	+0.0364	0

It will be seen that all these forms usually considered as incompatible are simply very small quantitative variations of the theoretical or normal forms. Thus the difference between rutile and cassiterite admitted by systemists like *Dana* to be strictly "isomorphous" amounts to 0.03; the deviation of fircon from the normal is but twice this quantity, or 0.06. For brookite the deviation between the actual form and the normal corresponding to equal material points is but seven millimeters for a crystal of one meter—or one-quarter inch for a crystal one yard in height. For the detail we must, of course, refer to the German work.††

The equator of the *Deltoid A* B_3 *C* (Sect. II.) being formed of three atoms, will, these considered as equal material points, give again an equilateral triangle, or b: c=1: $\sqrt{3}$=1: 1.73206. By composition of the statical forces it follows that the vertical section x z is equivalent to A B C B; hence it must be a square, or a=c=1.73205. By reduction to hexagonal axes this normal deltoid is found to be a *rhombohedron of* 104° 29'. The observed form of calcite, Ca O_3 C is a rhombohedron of 105° 5', of Smithsonite, Zn O_3 C is a rhombohedron of 107° 40'. The difference between the two forms considered "isomorphous," therefore, is 155 minutes; the deviation of calcite from the normal—a deviation due to the difference between the atoms and *equal* material points, is but 36'. In regard to the theoretical determination of these deviations of volume and o the arragonite-form, etc., I must refer to the German work, where the *silicates* R O_3 Si are also mentioned. The difference between Augite and Amphibole corresponds to that between Aragonite and Calcite.

Of the *Rhomboids A* B_4 *C*. I have determined: sulphates, spinels (including *Diaspore*, etc?) and the *great family of mineral species having a nucleus of spinel*, comprising alum, leucite, felspar, zeolies, etc., (§§. 359-380):

Apatite is found to be a double salt referable to A' B'_3, when A', B' are compounds.

Of the physical properties of crystals the theoretical determination of the optical surface of elasticity is of special interest: hitherto this surface was altogether an empirical quantity. The circular polarization of quartz is also reduced to the constitution of the crystal (§§. 381 399).

In conclusion (§ 400), I repeat that my work is to be considered merely as the *programme* of Atomechanics; it will require the united labor of the scientific world to produce the *science* of Atomechanics! The more than twelve years of labor in this field have convinced me that soon or late this science will be worked out; for the *Panatom* is that material point

—da quel punto
Depende il Ciel e tutta la Natura. [*Dante*, Parad. XXVIII. 41.

Modern science receives the smallest fact as a precious gift; it will therefore be unlikely that she should ignore a fact so important as the one here announced: that the hypothesis of one single element is sufficient to account for the diversity of matter by giving the chemical, physical and morphological properties of bodies as simple mechanical consequences of Pantogen.

What will be the reception of this theory, I do not know; but I know that during the last twelve years I have had ample opportunities to appreciate the consoling truth of the bold word of our common master and teacher:

E pur si muove!

*The investigations of Gaudin are simply geometrical.

†The successive approximations in theoretical astronomy are well known, as far as relates to the motion of the Heavenly bodies in a *vacuum*. But these approximations are to be followed by those determining the resistance of the cosmical medium. Encke has long ago shown that it must be taken into account in order to determine the motions of comets. I have proved that this resistance is quite considerable, even for the planets, and that a portion of the motion thus lost is converted into magnetism; also that the generating rings of the planets separated from the great central body after equal intervals of time, so as to show that the evolution of the primary nebula was an oscillatory motion. The problem solved by me is very much the same in kind as the following: Having given a number of bodies, their velocities, masses, etc., falling in a resisting medium, to calculate the original height of these bodies and the time elapsed since they commenced to fall. See: On the Density, Rotation and relative Age of the Planets. Sill. Journal, 1864, vol. 37; Planetology, Sill. Journal, 1865, vol. 39; "Forhandlinger" of Scandinav. Naturforskere, Copenhagen, 1860, p. 455, a. o.

‡See: Terrestrial Magnetism as a consequence of the Earth's Motion in Ether, Copenhagen, 1860—Sill. Journal, 1864, vol. 38, p. 420. In all these papers, *Ether* must be considered as something *material*, capable of resisting bodies moving therein.

***Discrasite* has an angle of 119° 59', and is accordingly classified as prismatic; if the angle (which changes by heating!) were only *one minute* larger it would be considered as hexagonal! That is very convenient, of course; but just as useless and arbitrary.

††The fundamental form of Brookite is c=1.2 of von Kokscharow instead of his o=P. But c, resulting from my calculations, is evidently the true fundamental form, as seen by referring to the figures of Brookite given by this distinguished mineralogist, in his "Materials for the Mineralogy of Russia." The form c is not absent in any figure, but predominant in most of them.

Mining Summary.

GOLD AND SILVER.

Nevada.

Quarterly Returns of Mines in Lander County.—We give below the returns of mines in Lander county which have produced bullion during the quarter ending June 30th, as compiled from the books of the County Assessor. The Austin *Reveille* says: With the exception of those mines which have had less than a ton of ore worked (fifteen in number, all of which are omitted) the table is complete. The exhibit will be found very interesting, and is worthy of attentive examination and comparison with the returns of previous quarters:

Names.	Tons	Lbs.	Avr. $	T.	Names.	Tons.	Lbs.	Avr. $	T.
Amigo	2	320	56	19	North River	19	1,553	211	39
Black Ledge	26	936	104	09	Oleander	2	354	113	49
Buel North Star	127	331	163	63	Oregon (Dollarhide)	1	120	253	89
Bonner Ledge	2	882	324	45	Patton & Monroe	1	926	143	74
Carter and Drake	3	1,295	77	55	Perkins	3	963	214	44
Cuba	2	1,095	114	13	Quintero	1	90	63	61
Chase	3	359	314	81	Rough and Ready	2	100	123	90
Craycroft & Brown	2	222	49	47	St. Louis (Cortez)	21	1,250	252	53
Diana	37	936	103	60	Storey	1	170	253	79
Elkhorn	1	1,145	535	41	State of New York	7	1,630	165	26
Empire State	6	746	101	38	Semanthe (N Y. & A.)	9	530	94	14
Fuller	13	1,300	741	67	Silver Cord	1	1,000	313	86
Florida (N Y. & A.)	173	385	206	10	St. Louis	2	195	73	73
Farrell & Hixon	5	825	266	77	Silver Parlor	4	1,220	77	24
Great Eastern	3	1,235	70	91	Social & Steptoe	150		90	00
Gen. Cochrane	1	220	232	72	Troy (N. Y. S. M. Co.)	38	498	87	06
Gen. Siegl	2	1,412	222	36	Timoke	96	1,460	241	49
Guadelupe	4	1,130	155	48	Virginia	2	930	208	21
Livermore	6	170	291	84	Vineyard	9	124	220	57
La Plata	2	1,200	73	80	Washington	3	1,695	447	69
Liberty	3	1,552	50	23	Wall and Isabella	14	1,560	137	07
Magnolia	53	394	120	26	Whitlatch Union	1	500	306	78
Moses Scramlin	1	955	50	88	Whitlatch No. 2	9	1,458	187	18
Montauk	1	1,490	250	70	Young Ame. (Mt. H.)	1	158	80	61
North Star (M. Co.)	507	1,557	149	40					

The whole number of tons of ore reduced during the quarter was 1,438, which produced the sum of $232,335 57. The average yield of the 1,438 tons was $161 56 per ton—a result that fully maintains the character of Lander Hill, from which it was chiefly obtained, for yielding uniformly a high grade of ore. On comparing the present table with that of the previous quarter, notable fluctuations and uniformity will be observed. For instance, the North Star mine of the Manhattan company produced during the last quarter 508 tons of ore which averaged $149 40 per ton, against 384 tons, averaging $141 37 per ton, in the former quarter; the Florida produced 173 tons, which averaged $206 10 per ton, against 101 tons, averaging $351 96, of the former quarter; the Buel North Star produced 127 tons, which averaged $163 63 per ton, against 31 tons of first class ore, averaging $182 56, and 16 tons of second class ore, averaging $51 52 per ton, of the former quarter; the Timoke produced 97 tons, which averaged $241 49 per ton, against 100 tons, averaging $276 59 per ton, of the former quarter; the Fuller produced 14 tons, which averaged $741 67 per ton, against 4 tons, averaging $349 34 per ton, of the former quarter; and the Diana produced 37 tons, which averaged $103 60 per ton, against 195 tons, averaging $94 30 per ton, of the former quarter. The most marked fluctuation is that of the Great Eastern, which produced during the last quarter only 34 tons, which averaged $70 91 per ton, against 137 tons, with the remarkable average of $345 93, for the quarter ending 31st of March. Considerable exploration has been carried on in the Great Eastern during the last three months, the result of which we have not learned. Several mines, which produced bullion in the former quarter, are not included in the above table; and others again, which were not mentioned then, appear in the present return. The most noticeable of the latter is the Gilligan mine of the Social and Steptoe company, in Egan canyon, which appears in the present table with the good product of 150 tons, averaging $90 per ton, which is scarcely sixty per

cent. of the silver contained in its peculiar ore. The returns of the last quarter are generally very encouraging.

The Comstock—The Circular of the San Francisco Board of Brokers, dated July 20th, reports: Savage at the close sold at $4,400. The ore extracted during the week ending July 13, amounted to $2,099 tons, showing an approximate value of $77,647, or an average of $36 98 per ton. The previous week compares as follows with these returns: Extracted, 1,629 tons; approximate value, $66,440, equal to $40 78 per ton. The various portions of this mine yielded the following amount of ore during the week under review: Old works, 36 tons; north mine, on seventh level, 1,143; middle mine, same level, 558; south mine, same level, 263; third station drift north, 54; and the same station, drift south, 54. The following statement from the annual report of this company, for the fiscal year ending July 10, has been kindly furnished us by the Secretary:

RECEIPTS.

Cash on hand July 10, 1866	$40 023 85
Bullion	2,912 669 32
Premium on bars	18,000 76
Ore sold	4,383 07
Other receipts	824 40
Total receipts	$2 975,899 40

DISBURSEMENTS.

Dividends	$1,120,000	
" (unpaid)	12 500	
		$1,107,500 00
Labor account		277 227 00
Reduction of ores and expenses at Co.'s mills		241,995 00
Reduction of ores at outside mills		790,458 98
Mining supplies		69,971 49
Wood and coal		92 502 86
Legal expense		60,088 92
Other expenses		298,639 48
Cash on hand July 10, 1867		77,715 58
		$2,975,899 40

Number of tons mined during the year, 72,295; reduced, 69,376½; sold. 53; on hand, 2,865½. Cost of production, $7 91; reduction, $14 04—total cost per ton, $21 95. Average yield per ton, $11 94 .....The San Francisco *Mercantile Gazette* says: The monthly statement of the Crown Point is as follows:

RECEIPTS AND DISBURSEMENTS FOR JUNE, 1867.

Rhode Island mill expense	$'4 973 25	$700 00
Mine expense	22 397 86	460 03
Mine Improvement	9 476 46	.....
Outside mills	13.425 00	.....
General expenses	1,046 95	.....
San Francisco expense	751 63	100 00
Legal expense	1 421 37	.....
Taxes	1,383 37	.....
Assaying	693 19	.....
Discount	459 11	.....
Treasure freight	57 83	.....
Coffey & Risdon	1,500 00	.....
Bills receivable	15,655 00	.....
Cash on hand June 31, 1867	20 234 25	.....
Cash on hand May 31, 1867	.....	22,135 59
Bullion	.....	77,704 73
Premium	.....	936 62
Ore (croppings)	.....	2,918 50
	$104,945 27	$104,945 27

This is a favorable return, since the amount of cash on hand, with the sums paid for permanent internal internal improvement, show an excess over last month. The cross cut from the winze has we learn, been discontinued, and the shaft proceeded with towards the 600 feet level.....The report to the stockholders of the Chollar Potosi company, for the year ending May 31, 1867, is an interesting document. The secretary's report gives the aggregate receipts and expenditures as follows:

Bullion and premium	$1,320,948 83
Sales of ore	27,374 30
Sundries	22 903 79
Total receipts	$1,371,226 92
Labor	$254,196 96
Working ores	767,893 25
New shaft	110,957 41
Other expenses	63,107 09
	1,196 154 71
Balance—	
Dividend No. 1	$ 66,125 00
Cash on hand	108 937 21 $175,072 21

The number of tons mined was 57,799. Cost of mining, $4 48, a reduction of $1 51 per ton; cost of crushing, $14 97; cost of new shaft, etc., $6 39 per ton; average of ore, $25 73 per ton. The body of $25@27 ore opened up at the Blue Wing. Santa Fé, and that Santa Fé station has a length of 210 feet, 35 feet wide, and 340 feet deep, as far as explored. There are other bodies of ore not fully explored and tested.....The Overman stock stood at $250 on the 11th, and under the influence of the panic fell to $110, afterwards rising to $175. The annual meeting of the stockholders of this company was held on the 11th. The whole number of shares is 3,200. Of these about 100 are held by the company abandoned for old assessments. There remain about 3,100, held by more than 100 holders. Of these 2,921 shares were present, and voted unanimously for the following trustees: J. J. Robbins, J. E. de la Montagnye, A. K. Grim, John Sime, H. L. Hill. At the trustees' meeting J. J. Robbins, Esq., having declined a re-election as President, J. E. de la Montagnye, Esq., was elected President, J. Norwood Secretary, and McCullough Superintendent. Subsequently Messrs. Barron and Sunderland were elected trustees, in place of H. L. Hill and A. K. Grim resigned. There was no regular secretary's report, owing to the unwarrantable absence of the out-going Secretary from his post. The assets of the company, as well as could be ascertained by the books as left by Mr. Newby, including $43,000 in the Bank of California, $1,800 in the safe, $2,000 with the superintendent, and some bars, amount to $68,493, and no debts. The receipts of bullion have been, at the San Francisco office, $6,000 this week.

Reese River.—The *Reveille* is informed that the Florida mine on Lander Hill—the property of the N. Y. & Austin company yielded—during the last quarter, while exploration was carried forward, the handsome sum of $36,000, and adds: From the fine body of ore now exposed in the levels we should not be surprised if the product of the mine in the present quarter exceeded the sum of $60,000.....The same paper notices the starting up of several mines at the foot of Lander Hill, that have been allowed to lie idle for a long time, among them the Sacramento and the South America.....July shipments from Austin by Wells, Fargo & Co., amounted to bullion weighing 7,049 pounds, and valued at $109,221 87.....The Plymouth company is erecting on Lander Hill good and substantial hoisting apparatus for the working of its vertical shaft .....The Keystone mill is to be soon closed for repairs and enlargement. The mill will be furnished with two additional roasting furnaces, making eight in all; and its pans will be increased to fourteen, and its settlers to six; which experience has shown to be the true complement of a twenty stamp mill for the reduction of the ores of this district. These repairs and additions will be completed in about three weeks. It is anticipated that Gen. Page will open his mill to the owners of mines at greatly reduced rates for reduction.....Work has been resumed upon the Savage mine.

Silver Bend.—The *Reporter*, July 20th, says: We understand that at a depth of about twenty-five feet upon the Silver Queen location, just north of the Silver Champion, a splendid body of ore has been found about four feet in thickness. Also, that at a depth of eighty feet upon the Mountain Queen, lying between the Transylvania and Quintera, a ledge has been developed which shows a stratum of good milling ore four feet wide.....Regarding the suspension of the La Plata mill [noticed in last week's JOURNAL OF MINING,] Superintendent G. B. Montgomery informs the *Reporter* that the stopping of the mill is only temporary. He says: I presume work will be resumed on the mill as soon as the mine is penetrated in the second level and opened to some extent. The inability of the superintendent to get the mine properly opened is, I presume, the principal cause of the temporary suspension of work on the mill. The adamantine hardness of the rock has made the progress much slower than was expected. There is not the least ground for censure or complaint of the company.

Hot Creek.—A correspondent writing from Hot Creek on the 24th of July, says that the mill of the Old Dominion Silver Mining company is being pushed forward with commendable energy. The mill will be started with ten stamps and the necessary complement of pans and settlers, but as soon as the developments on the old Dominion and Merrimac ledges of the company will justify the extension, it will be increased to a complete twenty stamp mill. The existence of a good mill in the district will tend to the opening of many of its mines, and will at the same time give an impetus to mining operations in the contiguous districts of Reveille, Morey, Empire, Danville, and Milk Springs—*Ib.*

Cortez.—We now hear almost daily the most flattering accounts of the developments in this district. A gentleman who returned from the district yesterday, says that the Cortez Giant of the Mount Tenabo company presents a grand spectacle, the sight of which would dispel every doubt of its being a mine of the greatest value. At the depth of ninety feet below the lowest level, the workmen uncovered a body of rich compact ore, fully eight feet thick, which yielded by assay $890. The apparent uniformity of its high quality of ore leads to the judgment that the mass will average easily $200 per ton. Accounts from the St. Louis mine are, to say the least, fully as flattering. As the mine is penetrated ever so slightly, bodies of the richest quality of ore are developed, until the rule seems to be, the deeper the richer. By well-directed blasts great masses of mineral are dislodged and thrown down, which are estimated to average by mill process $250 to $350 per ton. These statements appear to be exaggerations, but they are borne out by the actual yield at mill of a large amount of ore obtained chiefly from the croppings of the mine, which has exceeded $200 per ton. The developments now going forward in the Cortez Giant and the St. Louis will lead to the opening of other claims, of which there are nearly twenty, on Mount Tenabo, and will eventually render the district one of the most famous in the State.

Tuscarora *nee* Goose Creek.—We last week published a rather discouraging account of these mines. The story of the returned prospectors, as told by the *Reveille*, July 25th, is somewhat more cheering. Crossing the first range north of Independence river, the party discovered gold in a gulch which they named McCann gulch, in which there is a stream running about 1500 inches of water, and emptying apparently into the Owyhee. They also discovered quartz ledges in the vicinity, and organized the Tuscarora district, and adopted regulations similar to those of the Reese river district, with H. McCann as recorder. For surface claims they allowed 200 feet up and down the creek, and 500 feet on each side; bank or hill claims to be 200 feet front, and to extend to the centre of the hill. Several ledges were found and located, as the Tuscarora, Beard, Gold Point, etc. One immense ledge showed gold for the width of one hundred feet in a reddish decomposed quartz. The general course of the ledges is north and south. The party brought in specimens of the gold-bearing quartz as well as of the fine free gold obtained in the gulch, both of which were shown to us. Before they had fairly prospected their discoveries, they were obliged to return hither for provisions, but they believe they have found the "richest thing" or the "biggest bilk" in the country. The mines are reached in five days' travel from Austin over a good road.

New Pass.—The gold-bearing ledges of the New Pass district, about twenty-five miles due west of Austin, says the *Reveille*-August 2, are now being developed by a company under favorable circumstances. The ledges were discovered about two years ago, and although they were pretty thoroughly examined by competent hands, and pronounced to be worthy of a large investment, they appear to have received no earnest attention from capitalists. Good gold-bearing veins, with the most promising indications, they literally went a-begging. The veins occur under the happiest conditions. They are found only in greenstone, which in most other localities where gold quartz exists changes to a chloritic slate, which is regarded as the mother of gold. The greenstone occurs in small isolated patches in the country rock, which is porphyry and limestone. Among the principal veins in the district we may mention the Superior and the Atlantic, of large size, and a cluster of small rich veins known as the Gold Belt series. The latter exist in a small hill, which may be opened at a slight cost, and every vein in the cluster exposed and developed with efficiency and economy. The Superior is less than one hundred yards from the Gold Belt series, in which position they might be worked to the best advantage by the same company. The Superior is a strong, well-defined ledge, quite ten feet thick, holding ore of very simple combination. The gold is generally free, or occurs with a little oxyd of iron. Two tons were taken from the dump, where it had been lying for months, and from which the choicer specimens had been selected by different persons from time to time, and brought to this city for reduction. This lot of ore gave an average yield by assay of $32 of gold per ton. The small veins comprising the Gold Belt series produce a far richer but less simple ore. It contains some sulphurets, in which the gold was not found chemically fixed. It exists abundantly in the galena in the form of beautiful threads or wire, which ramify in every direction. Various tests were made of the ore, and the yield by assay invariably exceeded $100 of gold to the ton. It will be observed that these figures are much higher than the average yield of the gold-bearidg ledges of California.

Twin River.—Mr. S. P. Roberts, working the Silver Mountain ledge in Ophir canon, in an opening a few feet below the surface obtained ore assaying as high as $500 per ton.—*Ib.*

Washington.—We learn, says the *Reveille*, that ore has been taken from the Pleiades, Friend, and Cosmopolitan ledges of that company, and reduced at the Parrott mill at Big creek, with the good yield of $50 to $60 per ton. The ledges are represented to be of large size, and carrying plenty of minerals, and are such as would employ a good mill or smelting furnace. Indeed, there is something more than talk now going on in reference to the erection of one or both of these reduction works.

Echo—The Humboldt *Register*, July 13, says that the Mountain King company has commenced on its mine with several men.

Star.—The De Soto company is again at work, under the direction of James Hendra, an old and experienced miner.—*Ib.*

Northumberland.—A few tons of ore from the Northumberland ledge were recently reduced, and yielded about $85 a ton. The ledge is about six feet thick, and this is said to be only an average of the ore throughout its entire width, so says the *Reporter*.

Idaho.

A telegraphic dispatch, dated Ruby City, Aug. 14, received by the Poorman Gold & Silver Mining company at their office in this city, from Judge Robertson, their energetic superintendent, states that rich ore has been struck (probably in one of their shafts,) and that rich bullion and ore is coming forward. We understand that this company has secured, by right of discovery, 2,000 feet north adjoining their 600 feet on the Poorman lode. The value of this discovery, and evidence that the true vein has been struck, has been proven by experimental shafts and tunnels. Free gold and horn silver have been found down the gulch, even to the farther end of the 2,000 feet, which is considered further proof that the discovery is an extension of the original Poorman vein. The extent of the value of this additional property of the company will be appreciated by those who are conversant with the results that have already been obtained from that locality. We understand that Prof. D. R. Ford, assistant superintendent of the Poorman, is expected in this city about the 10th of next month, having with him "bullion and rich $7,000 ore," and undoubtedly many facts that will interest those concerned in that part of Idaho. .....We condense as follows from the *Avalanche* of July 27 A conditional sale of 750 feet on the Pauper ledge has been made for $12,000. A force of men were put to work on Wednesday to prove it up by actual development. The purchasers are men of capital and intend business. David S. Meeks and partner have sold their interest in the Baxter for a substantial sum in cash, and the buyers are to complete the contract of sinking the balance of 160 feet. In Flint, the prospects are surely brightening. Mr. Charles Libeneau has just made a very successful run of Leviathan ore in Black's Mill. Of course the loss in working was considerable more than it should have been, but a point has been established in that it is proven that the ore can be worked with the machinery at hand at a large profit. Mr. Libeneau intends to start up the mine again and take out ore right along.....In Blue and Jacob's gulches the placer miners are engaged in clearing-up the ground over which they have worked since the flow of water in the spring, and so far as we can learn with large pay. .....The prospectors who went to the sources of tha Owyhee in the early part of this month, have returned after an absence of about three weeks. They report having found gold, but not in quantities which is liable to produce a general stampede, though parties will pay that section another visit this summer. One of the party just returned informs us that a little gold was found in all the dirt and gravel from the surface to the bed-rock, but the diggings were full of large bowlders, and scarcely any timber in the surroundin'g country, and what there is, of too small growth, to make lumber. The location of the section visited is about 100 miles a little south of east of Silver. The men met with no Indians, but saw signs of their presence at various points not long ago .....Mr. Cope informs us that the Potosi company has made arrangements to have fifty or more tons of Potosi ore crushed in the Minear Mill. At a depth of fifty feet the water became troublesome in the shaft, and sinking stopped, and levels started. We understand the ledge to be gaining width.....The New York and Oro Fino mill has been making a trial of Baxter, and we learn will be employed upon it regularly after next Monday. .....There are now in constant operation the Owyhee, Cosmos, and Morning Star mills, and the Webfoot most of the time. The Owyhee will have its addition of six pans completed by the middle of next month, which will give constant employment to the mill's twenty stamps, which, added to the others named, will make over forty stamps nearly certain to be in continual action, besides as many more of which there is reasonable hope to believe will be supplied with ore, and be stamping out bullion, and making business before the year closes .....The Enterprise Arastrar below Ruby has been running day and night for several weeks, managed by Messrs. Coho & Dockum. They are now receiving rock from the Little Giant ledge, lying parallel with and near to the Oro Fino. The ore pays very well, so we are informed. The arastrar is propelled by water power, and is easily managed, and, of course, quite inexpensive. The pulp is ground in a pan obtained last year from the Ainsworth mill.....The *Mining News*, of July 11th, supplies us with the following: Captain Fleeson returned Thursday morning from J. Marion More's prospecting party for supplies. From him we learn the company is prospecting a large basin between the east and north forks of Salmon. The company consists of sixteen men. The basin is about fifty-two miles below this place. Favorable reports reach us from the North Salmon. Independence City is the name of the town building on North Fork. At last accounts it consisted of three stores, three saloons, and one blacksmith-shop, one meat market, etc., in all about twenty houses.....From the Lewiston *Journal*, of July 11th, we take the annexed: We returned from a trip to Warrens, Florence, Slate Creek, and Salmon River last evening. But Florence and Warrens are now in the height of their labor season, and the claims are generally yielding well. The season has been late in Warrens, and much damage had been done to claims by high water, thus causing much extra labor. The quartz veins are promising well. Richer ore is being found each succeeding day. The new ditches on Salmon River of White & Shissler, and the French company are in full operation. The French company washed off the top sand from a portion of their diggings, and saved thirty-six ounces of good gold dust in their sluices, without shoveling in any of the gravel. This claim will pay upwards of twenty dollars to the hand per day, and will last for years. The roads and trails we found quite good, and nothing now impedes travel to and from the mines but adverse inclination. A party of nine men arrived here last Sunday from Portland, *en route* for some new diggings, which they report to have been struck about sixty miles from Florence, between that place and Lemhi. One of the party was there last winter, who left Lemhi with a company of five prospectors, four of whom were frozen to death, he being the only one who survived. He says that while there he made from thirty to sixty dollars per day .....The same paper, of July 4, has editorial correspondence from Warren's camp, which reports favorably of mining affairs there. The hill claims of Sanderson & Bemis yielded $5,000 in four weeks with the labor of five men. Others were doing as well, and the high water had prevented mining in the stream. More men there than one year ago. At Florence, the mines on the tributaries of Summit Flat were paying largely, will produce more gold this year than any one since 1863. Quite a number of quartz prospectors are in the northern diggings. A quartz mill is to be built in Warren's, the stock for which has been subscribed. Some arastrars are at work in the vicinity with profit.

Ohio.

Somebody having questioned the accuracy of certain statements made by a correspondent of the Cincinnati *Commercial* relative to the new gold mines near Bellevilie (republished in the JOURNAL OF MINING, July 27,) that individual has again visited the gold region, this time in company with a returned Californian, who had spent some sixteen years in the gold mines, and backs up his previous assertions with the following report: "I can but say I am positively correct in my former conclusions that there is no quartz rock in this vicinity, except among the bowlder drift; and that there is no evidence of any upheaval or disturbance of the sub-carboniferous sandstone rock, and that the gold found here was deposited from drift, and not from the decomposition of gold-bearing quartz rock in the immediate vicinity. The character of the gold found here shows by its worn appearance that it has been transported from a distance. It possesses none of the angularities that it would have had it been deposited by the gradual disintegration of gold-bearing quartz rock, at this or in the immediate neighborhood of the gold fields here. As to the productiveness, we have been actively engaged since our arrival in determining this point, and have made accurate determinations

of the gold value of the drift in different localities along the line. It is much richer than I had an idea it was when I wrote my first communication, and yields upon an average one hundred and forty-seven grains of gold to the cubic yard of dirt washed, which, at three and a half cents a grain, would be $5 14 gold. Compared with the gold fields of Canada (see geographical report,) those of Ohio are three times as productive; and it is the opinion of those who have seen and worked in gulch mining in California, that they rank with them in productiveness. Since our stay here we learn that it is not an unusual thing in digging cellars and wells in the town, for gold to be found in the excavation of them. Of this fact I had a practical illustration in the sinking of a patent pump, an iron gas tube driven down through the sand and gravel to a depth to meet water, thus doing away with the expense of a well. To the end of the tube in the ground is a valve, and a pump attached to the other. One of these pumps was put down in the main street of the village, a few yards from the hotel we were staying at. At the depth of fifteen feet water was found, and after attaching the pump, a few strokes caused the water to flow from its nozzle, mixed with some sand, in which, upon examination, particles of gold were found. The presence of the precious metal seems to have been known in this vicinity for a long time. The Indians knew of it before the settlement by the whites, and many traditional stories are current here of large deposits of gold known to them, but never revealed to the palefaces. I have sent specimens of the gold to Mr. W. Wilson McGrew, where the curious can see them."

Colorado.

The Georgetown *Miner*, August 8th, gives the following brief statement of Messrs. Garrott, Martina & Co.'s process of ore reduction, which the editor pronounces "the most successful of any yet introduced." The reduction works are now in successful operation. The ore is dry crushed by stamps, and when sufficiently fine for working, is carried by machinery to a bin, from whence it is conveyed by an elevation sixty-four feet in length to a hopper over the chlorodizing cylinder which is, without doubt, the best invention yet introduced and put in operation in the Territory, for the chlorodizing or desulphurizing of ores. This cylinder is Wm. Bruckner's patent, and is the only piece of machinery used in the works upon which a patent exists. After the chlorination is perfected, the ore is discharged upon a brick hearth, from whence, after cooling, it is shoveled into a bin at the end of and below the hearth, from whence it is carried by an elevator to a hopper over the two amalgamating barrels. After the amalgamation is perfected, the ore is discharged into a dolly-tub, where the quicksilver that runs over from the amalgamating barrels is secured. The amalgam is retorted, melted, and run into bars, upon which is stamped the weight, fineness, and coin value. The first run of these works was made last week, upon five tons of hardly a fair second quality ore from the Nuckolls lode. The average fire assay of this ore was $98 52. Coin value of the total amount of silver called for by assay, $492 60. The amount extracted was one bar weighing 182 oz. 14 pwt., fineness 944, coin value $222 98, and one bar weighing 189 oz. 19 pwt. fineness 964, coin value $236 67; making the total yield 372 oz. 13 dwt, coin value $459 65, currency value $597 54. The above shows what skilful manipulation and treatment can do with our ores. The process itself is the same as has been in use in Austria for upwards of a century, with the exception of the substitution of the Bruckner chlordizing cylinder for a reverberatory furnace. In working ores, a full analysis is made of the ore being treated, in order that the work may be successfully accomplished, by taking the proper steps to destroy all of its refractory qualities. The experience of skillful chemists and metallurgists is absolutely necessary to the successful treatment of ores by this process, and these works possess this in Mr. Martine and his able assistant, Mr. Kurtz, who have gained a full and complete knowledge of the practical reduction of ores, at various establishments throughout Germany. In regard to the cost of reduction we can say that this can only be obtained after a careful and skillful analysis of the ore. In the Nuckolls ore reduced, the amount of salt used was one thousand pounds, at a cost of ten and a-half cents per pound, making a total of $105. Nature gave to this country this chief element required in the reduction of our ores, but the greediness and avariciousness of men have stepped in, and assumed the responsibility of supplying us with salt, at a price which no person with a soul would think of asking. This hoggish propensity with which some people have been endowed, will always retard the growth and prosperity of any community upon which they can lay their clutches. We will have to endure it until a railroad reaches us, when this salt monopoly will be broken, never again to glut itself through the necessities of our people.....We condense as follows from the same paper: L. Shepherd states that at Empire the Eagle, Star, Knickerbocker and Peck mills are running with very good success. Since the 1st of April, Empire has taken out more gold than any other place of equal population in the Territory. Last week the Eagle mill from a thirty-six hour run, cleaned up $400. Day before yesterday the Star mill shipped a very fine retort, worth $900 coin value. Sluicing in some of the mines about Empire was commenced this week.....General Baldwin of Cincinnati, who is developing some lodes in West Argentine is having ore packed to the Georgetown works for reduction.....By assays recently made from the Hunkadora lode, by Professor Burlingame, we are convinced that it is about as rich a lode as there is in the district. It is the intention to build a trail to the lode this week, and get some ore down for reduction .....Prospecting is not as actively engaged in in this district, as it was some three or four weeks ago. Snow having nearly disappeared from the higher altitudes, new ground is opened up, and the prospectors are taking advantage of it in prospecting among the higher ranges. Work is progressing upon the W. H. White lode. As the shaft increases in depth, the ore vein enlarges, and the ore shows a large increase in silver.....The shaft on the Congress lode is now down to a depth of seventy feet, and a fine body of ore is in sight. Considerable chloride is found in the lode, and it is said the ore will yield well by free amalgamation.....The Little Giant furnace will start up as soon as its proprietors can get some ore crushed.....Work is to be resumed soon upon the Henry Clay lode. We are glad to announce this fact, as so good a property ought not to lie idle.....Albert Johnson, Esq., states that the shaft on the Herkimer lode is now down forty feet, and that some excellent ore is being raised.....The Anglo Saxon lode is being developed, about five hundred feet east of the old shaft, and some rich ore is being taken out.....There are about fifty men engaged in mining at or near Montezama, in Snake River mining district. These are daily receiving accessions of numbers. Should the season for mining hold late, as is at present hoped, there will be much work done in the development of the silver mines west of the range this year. Mr. Cullom is putting up a furnace at Montezuma, and Mr. J. T. Lynch will actively work Suky lode during the season.....The Central City *Register* says: The gold shipments for the week ending Wednesday morning, or thereabouts, show a total sum of $20,800. In four weeks from date we expect to see this amount doubled, perhaps quadrupled every succeeding seven days. The Briggs company, California and Live Yankee works. Prof. Hill's establishment, and others of greater or less magnitude, will then yield up their riches to swell the golden volume—to be credited we presume by the New York assay office to Montana, as heretofore. .....The editor of the *Register* writes: A ride of an hour took us through the prospects of the the North Clear Creek region. Most of its once busy machinery is idle, much of it fallen into disuse. The most active of those in operation are the Susenderfer and Black Hawk. The first is producing fair results from lean ores, the best being selected to await the introduction of a process which shall be more successful than any yet established. The Black Hawk is always alive though not always profitable. We are told it is now paying largely from Gregory ores, the usual yield being two hundred and twenty-five ounces per week. A small mill is pounding away very modestly near the entrance to Chase gulch, but with what success is to us unknown. Dr. Keith will start his desulphurizer next Monday, having been furnished with a liberal supply of ores from the Bates lode. Mr. Du Bois is quiet, owing to scarcity of material. We suggest to those who find it difficult to obtain lucrative employment, that they form combinations of capital and labor on some vein of known value belonging to their number, work and sell the ores to the highest bidder. This will bring thrift and prosperity, besides inducing thousands to come and join in the same laudable enterprises.....The Denver *Gazette* Aug. 6 says: Over fifty miners are at work on Four Mile Creek and the gulches above Boulder city. The amount of gold being taken out is over $1,000 per week.....The Ni Wot company will be running all their batteries, consisting of 50 stamps, by to-morrow, on ore from the famous Columbia lode. Three or four other mills are at work, and Haswell & Co.'s works, fitted up with the "California" process, are rapidly approaching completion. Altogether the future looks bright for Ward District....By late arrival from Cheyenne we learn that nearly one thousand persons are on the town site, which resembles a large fair ground. No houses have, as yet been put up, and every one camps in or about their wagons..... The employees of the U. P. R. R. assert that the cars will be running to Crow Creek by the first of September.....A. S. W. writes to the *News* from Oro City, under date July 26, that miners are at work in nearly every place where work was done last year, and generally with as good results as ever. There are nearly as many men at work in Colorado gulch, as last year, and it is believed with better pay, Mr. Paul, of Backskill, has commenced work in Evans gulch, preparing the ground for a more vigorous prosecution of his prospecting enterprise next year. In Iowa gulch there are but five men at work at gulch mining. They are meeting with varying success. While at Cash creek, a few days since, I saw between nine and ten ounces of dust, the result of one day's work of five men shoveling from claims of the Cash Creek Flume company. Other companies there have taken out but little gold, but all are expecting to "clean up" soon, and as many of the claims in that vicinity are proverbial for their good pay, it is but fair to suppose that the gold shipments will be of respectable proportions in a few days. Parties who are prospecting in Granite district, opposite Cash Creek, are meeting with an abundance of success. The lodes they have discovered are said to be very rich; indeed, it is already creating quite an excitement. Granite district is more favorably situated for the profitable working of lode mines than most districts in this country, and if the new discoveries are as rich as they are represented to be, times will be lively about Cash creek next season .....Editorial correspondence of same paper dated Valmont, Aug. 9, give encouraging reports. About forty men are at work on Gold Run and Four Mile creeks, and are taking out from five to ten dollars per day to the hand. The dust is found mostly in pockets. From these gulches, and those being worked on James creek, about $10,000 have been brought into Boulder City. This is by no means all that has been taken out.

California.

Alpine County.—A. E. Kennedy, superintendent of the Mexican mine, Virginia City, Nevada, makes the following report to the trustees of the Morning Star Gold and Silver Mining company on their property: "Gentlemen—Having made a careful examination of your mine, I find that the work, so far, has been done to a good advantage and as economically as possible, and at present in such a condition that the work can be resumed at once, and for the further development of the mine, I would recommend that an incline be sunk on the west, or foot wall, as deep as practicable, commencing at a point where the main tunnel cuts the lode and continuing in the vein. By pursuing this course I have no doubt but that good pay ore will be found from the commencement, and from present appearances, will increase in richness in going down. You will have some water to contend with, but to a depth of one hundred feet, I think, it can be kept clear with a common force pump worked by hand. The indications for a large body of ore in this mine are equal to any I have ever seeen—the Comstock not excepted. When a greater depth is obtained you will find the ore almost entirely free from base metals, and I have no doubt can be worked by common mill process at the mine. I find there are two lodes here running parallel, and not more than two hundred feet apart, both being claimed by the Morning Star company. A tunnel has already been run in an easterly direction, one hundred feet from the original location, for the purpose of prospecting the second lode, the croppings of which look equally as well as those of the original claim. I would recommend that the tunnel be continued east till the lode is cut through. The distance will probably be one hundred and fifty feet, at a cost of six dollars per foot."..... The Alpine *Miner* says that work within and about the Tarsish mine is being prosecuted not only in a vigorous, but permanent shape. Next week four more men will be put on to raise a shaft out, following the pitch of the lode, and thoroughly explore the mine above, besides acting as an additional ventilator when a large force is needed. The north drift is now a distance of thirty-five feet, all in pay ore; the south drift about twenty feet, part pay ore and part poor in quality. Cross cuts will be made every fifty feet to determine the quality and quantity of ore to be depended on for purposes of erecting reduction works.....The I X L, Mountain and Pennsylvania companies are working away with renewed vigor; the first in quartz both in the upper and lower tunnel. The Mountain company is well managed, the thanks of the stockholders being due to the superintendent and secretary for the efficient manner in which their respective departments are conducted. The Pennsylvania company are adopting a similar course in the management of their affairs.

Placer County.—The Auburn *Stars and Stripes* is becoming famous for its big statements. The following item, headed "Six Thousand Dollars a Day," is the last that we have noticed: Mr. Peter Waldauer has a quartz claim about three miles below this place, between Ophir and Doty's Flat, that has for several years been subject to spasmodic fits of "yielding like blazes." But it took the ninety-first anniversary of American independence and the patriotic fervor born on that occasion to excite the Waldauer claim to its highest feats of accomplishment. On the Fourth Mr. Waldauer struck a vein of gold-bearing quartz, or rather quartz bearing gold, that completely eclipsed the Green Emigrant or any other mining yield that ever preceded it in Placer county. Within three days about eighteen thousand dollars were taken out, the use of cold chisels have been required to cut out the solid gold, in some instances. We presume, of course, that this is but a "pocket," and that the vein is only "spotted;" but very few such pockets would answer a man of modest aspirations.

Shasta County.—The Baker quartz ledge, at French Gulch, says the Shasta *Courier*, prospects surprisingly rich, and shows every indication of being a ledge of extraordinary value, as seventy-five dollars has been obtained from a single piece of rock taken from this claim. The rock is decomposed and porous, resembling honeycomb in appearance. Experience has proved that the French Gulch ledges are the best paying and most permanent in the county.

Meadow Lake District.—The snow is now gone at Meadow Lake, says the Nevada *Transcript*, July 10, and new mining operations are being commenced. Within the past week three or four mills have been started. Before the next winter these new veins will be yielding a large amount of bullion.

Utah.

Later advices from the new mines are to the effect that the Indians have killed and scalped some of the miners, and drove all the others out. Col. Bright, special postal agent, is said to report that the new mines are good; that the quartz lode discovered is a rich thing, and the placer diggings, as far as opened, were paying from fifteen to thirty dollars a day. The *Vedette*, July 27, states that many are leaving Salt Lake City for the new Eldorado, and adds: "We also learn that large numbers of those who left here have crossed over into the Wind river range, looking for the precious stuff, and the rumor is—without any reliable foundation, however, so far as we know—that they have also found rich quartz ledges and good placer mines. While we are disposed to credit the truth of this last report, for reasons entirely satisfactory to ourself, still we advise the public to be wary and not place too much reliance on the gold rumors that are afloat." .....The Salt Lake *Telegraph* of the 19th ult., says that a Mr. Gilmore returned from the mines of South Pass, and called at that office with a few specimens of the gold that he had picked up. According to Mr. Gilmore, the mines of South Pass have adopted the Montana mining laws, under which the twelve men that made the discovery have claimed 2,600 feet, and not far from the first claim they have made another of the same size. There were about fifty persons there when he left, but hundreds were on the way. He reports the diggings as near the head waters of the Sweetwater, four miles from Lander's Oregon cut-off, eight miles from the Lander junction with the South Pass, and about twelve miles from the Pacific Springs. The travel from Salt Lake city passes through Bridger, over Ham's Fork at Granger's ferry on Green river, and thence to the first crossing of the Sweetwater by the old emigrant road. The specimens brought in by Mr. Gilmore would appear to be gold-bearing quartz.

British Columbia.

Latest advices from Cariboo are to the effect that some excitement prevails in the vicinity of Richfield, because of new discoveries in the vicinity, on a creek running into Willow river. A discovery claim took out a prospect of four ounces and four dollars at the bottom of their shaft, only a distance of twenty-three feet from the surface.....On William Creek the dullness occasioned by the late suspension of mining operations on the claims in the centre of the creek, is not yet dispelled. The Davis company washed up for a week 122 ounces. Never-Sweat company are making ten dollars a day to the hand. Forrest Rose company cleaned up 13 ounces. Raby county had found prospects of $2 50 to the pan.....On Conklin gulch, the Moonlight company had struck dirt that prospected $1 75 to the pan, and had not reached the bed rock. The Ericeson washed up for the week 45 ounces. The Union company 18 ounces for the week. The Reid company washed up for the week 40½ ounces. Indian Queen company are making about $20 a day to the hand.

COPPER.

Michigan.

We condense as follows from the Houghton *Gazette*, Aug. 15: Work has been recommenced at the Concord.....Two steam drills will shortly be at work at the Calumet mine.....Explorations for the Pewabic lode, at the Albany and Boston, have been discontinued.....Nearly seven hundred men are employed at the Hiclo mine on the buildings at present.....The last statement of the Calumet company shows an actual indebtedness of $131,056 73. At the Cliff mine the man-engine is undergoing repairs. No additional particulars relative to the late accident. .....The force at the Mendota is ordered to be discharged. .....The Phœnix is experimenting with nitro-glycerine..... The following products are given for the last month: Central about 95 tons; St. Clair, 14½ tons; Bay State, 20 tons; Phœnix, 28 tons—18 from stamps.....The Copper Falls product for July was 71 tons.

Queensland and South Australia.

The boring for coal at Colac, South Australia, is said to be progressing very favorably. The bore is now 125 feet. At 65 feet a dip of coal, about six inches in thickness, was passed through Immediately under this was a stratum of kerosene shale, about eighteen inches thick; at about ninety feet they came upon another another seam of coal of some nine inches thick; after which they passed through kerosene shale of eight feet in depth. At 115 feet coal was again found, the seam being about eighteen inches in thickness. Then came three feet of blue sandstone, and again at 125 feet they are upon kerosene shale. The samples of coal improve very considerably as they go down, the last few being very fine, clear samples, and when burnt in a candle or the fire, the smell of kerosene is very small.

LEAD.

Wisconsin.

Yesterday several experienced miners visited the diggings of Vandever & Stevenson, in Wisconsin, and came home with the opinion that the lode will be one of the most fruitful ones yet discovered in this region. The mineral being taken out is of the most valuable quality, which is always idicative of extensive veins. Enormous chunks are raised, several having balanced 600 and 800 weights. One thousand pounds an hour can easily be taken from the lode, with the present facilities. The steam pump is being prepared for more effective work as the deep water is approached. The idea so generally prevalent that these are old diggings is erroneous. The ground was "new" when Messrs. Vandever and Stevenson commenced mining there three months since. Quite a sum of money had been expended by the time the "paying" mineral was struck. They get the highest price paid for mineral on the other side. The Spark's Cave Mining company, near Fairplay, are at work with their Earl pump and steam engine, emptying the cave, in which they have discovered mineral, as fast as possible. They are finding large mineral. The cave extends nearly a thousand feet in an east and west direction, a new apartment having been discovered. If there is reliance to be placed in "indication," there is a mine of wealth beneath the water in this cave. We learn that Denman & Co., who have a steam pump at work half a mile north of Vandever, Stevenson & Co., have discovered mineral—in how great quantities we are not informed. It seems as if the whole tract is bound to yield mineral wherever it is properly worked. But it takes capital and pluck to succeed in mining operations there. Mr. George Wilde, who has a furnace about twenty-five miles northeast of Dubuque, has recently purchased 300,000 pounds of mineral at $52 per thousand. He will commence the smelting of it to-morrow.—*Dubuque Times.*

[We presume the "mineral" which plays so conspicuous a part in the above paragraph is galena. It is curious that no allusion is made to the nature of the ore.—ED. JOURNAL OF MINING.]

COAL AND IRON.

Pennsylvania.

(Special correspondence of the JOURNAL OF MINING.)

WILKESBARRE, Pa., August 15, 1867.

In my last to you I mentioned that it is more than probable the large carrying and mining companies of the northern part of the Wyoming Valley—the Pennsylvania Coal company, the Delaware, Lackawana & Western, and the Delaware & Hudson—will eventually absorb the smaller operations and enterprises of this part of the Valley. I did not at the time expect to have so soon to record an important step in that direction. Yesterday, I understand on very good authority, the sale of the lands and mines of the Baltimore Coal company to the Delaware & Hudson Canal company, was completed. The price paid, I understand, is $1,700,000. The amount of land is 1,400 acres, 800 acres of which is coal land. The improvements are extensive and substantial, and the price is not considered excessive. This will give you some idea of the value of property here, though the Baltimore company's lands are perhaps the most valuable in the Valley. This is a great step towards the consolidation of the mining enterprises here. The Baltimore company being the richest in this part of the Valley, it is needless to add the sale was not made on account of pecuniary difficulties.

The Pottsville *Standard*, August 17, says: The amount of black-band iron ore shipped over the Mill Creek Railroad for the week ending August 10, 1867, was 58 08 tons; previous, 3,143 10 tons; total; 3,201 18 tons.....The shipments for the week were from the slope of Jas. P. McGinnes & Co., east of Mill Creek, operations at the McGinnes shaft being still suspended on account of the improvements now being made.....The amount of black-band iron ore shipped over the Schuylkill Valley Railroad for the week ending August 10, 1867, was 50 08 tons. This was the first shipment from the workings of Luther & Dreher, at Lick Run, mentioned in our issue of last week.....Specimens of very rich brown hematite ore have recently been found on Schuylkill Mountain, south of Schuylkill Haven. The wet weather has prevented extensive explorations, which, however, will be made soon. In the meantime it would be advisable for farmers and property owners in that neighborhood to examine carefully any specimens of ore they may find, as in case of the erection of iron and steel works in that vicinity, the discovery of good ore there would greatly increase the value of their property.....In reference to the erection of steel works in Schuylkill county, at a meeting held August 10, on motion of Gideon Bast, Esq., Dr. Samuel H. Shannon, Major James Wren, Jacob Deibert and Pliny Porter were appointed a committee to examine the different localities, and report at the next meeting the best site to erect the works. The next meeting will be held at Koons' Hotel, Schuylkill Haven, on Thursday, August 22, at 2 o'clock P. M. The company will then be organized, although a small amount of money still remains to be subscribed towards the undertaking.....The Hazleton *Sentinel* says: Mr. Jonas Reese is pushing vigorously the work of sinking his new slope in Beaver Meadow, and the prospects for good coal in paying quantities are considered good. The slope is in the northern part of the village.....Northumberland now boasts of a rolling mill. The first bar of iron ever made in that borough was rolled recently in the new rolling mill erected by Van Allen & Co.....The *Miltonian* says: Northumberland possesses one of the finest locations for a place of considerable importance, both as regards mechanical and commercial pursuits, to be found anywhere in the State, and its growth has only been retarded by the penny-wise doctrine practiced heretofore by some of those holding the majority of the land in the vicinity.

Michigan.

The Negaunee *News* reports the receipts of ore and pig iron at Marquette, by the Marquette & Ontonagon railroad, as follows:

By whom shipped.	Prev'sly rep't'd.	w'k en'g Aug. 3.	Total Tons.	Prev'sly rep't'd.	w'k en'g Aug. 10	Total Tons.
Pit's & L. Iron Co.....	29,985	2 660	32,645	32 615	2,534	35,179
Edwards Mine.....	1 921	.....	1.921	1.921	18	1.939
Cleveland Iron Co.....	22,717	1,028	23,775	23,775	890	24 665
Marquette Iron Co.....	3 613	293	3,906	3,906	302	4 208
Lake Superior Iron Co.	60 017	5,474	65,491	65 491	4,221	69 712
New England Iron Co.	7,352	199	7.551	7 551	.....	7,551
Washington Iron Co....	10,447	696	11.143	11,143	872	12,065
Jackson Iron Co.....	139	.....	139	139	.....	139
Ore to local Furnaces.	9,270	930	10,200	10 200	889	11,089
Total Iron Ore.....	143,591	11 280	156,771	156,771	9,726	166,497
PIG IRON.						
Morgan Iron Co.....	2 834	528	3,362	3.362	213	3.575
Greenwood Iron Co....	3 458	172	3 630	3.630	53	3,683
Bancroft Iron Co	2.028	.....	2.028	2.028	.....	2,028
Collins Iron Co.....	2.928	36	2.964	2 964	63	3,027
Michigan Iron Co.....	2,612	144	2,756	2 756	72	2,828
Iron Cliffs Co.....	57	.....	57	57	.....	57
Total Pig Iron.....	13 917	880	14.797	14 797	401	15,198
Total Ore and Iron..	159,408	12,160	171,568	171,568	10,127	181,695

Nevada.

Pahranagat District.—We received the other day, says the *Reveille*, July 25, a sample of coal from Mr. Henry Raymond, which is said to have been discovered about fifteen miles from Hiko, the county seat of Lincoln. It is a good-looking article of anthracite coal, and was found in a vein fifteen inches thick on the surface. We had a piece burned in a muffle furnace, and it ignited readily and formed a bright glowing coal, leaving a residium of less than three per cent. of ash. In appearance and gravity it resembles the best coal found upon the coast. It is the opinion of a competent judge that the coal is of the later formation. A deposit of any considerable extent will prove of immense value to the mining section in which it exists.

Montana.

The following letter, written by A. K. M., and recently published in the New York *Tribune*, will be read with much interest by many readers of the JOURNAL OF MINING. To give place to it, we hold over our usual summary of Montana mining news until next week:

VIRGINIA CITY, MONTANA TERRITORY, July 9, 1867.

The term "Vigilance Committee" is familiar to all Eastern readers, but there are few who have just conceptions of crime as it compassed the isolated mountain mining regions, or of its inevitable merciless retribution. California tolerated the rule of murderers and desperadoes for years, but finally effected an organization founded on the maxim *salus populi suprema lex*, and the leaders of disorder and lawlessness were executed or banished. But California then had large cities, vast commerce, easy access to the great business centres of trade, and a social bulwark to strengthen the harsh but imperative reformation. Not so with the territories of the Rocky Mountains. Their wealth was discovered just when the golden slopes of the Pacific had become intolerable for those who preferred any crime on the decalogue to honest industry. Colorado, Idaho, and Montana were isolated from the civilized world. Hundreds or thousands of miles had to be travelled over mountain passes and almost trackless plains, unpeopled save by the pitiless savage, and the population was of necessity rude, without social restraints, and naturally tended to semi-barbarism. There was no government, no law, no access to the protecting force of the national authority for years, and here were most inviting fields for the banished desperadoes of other lands, and every incentive to lead the upright down through the tempting but ultimately fatal labyrinth of crime. Few families were among the early settlers, and the happy influences of faithful wives and virtuous daughters were unknown. The influence of woman, so far as felt, came from the hopelessly fallen, and, like all perverted angels of light, they but hastened the mastery of wrong and led the way. Gamblers plied their vocation without blush or restraint on the most public places. Murderers infested every locality where there was the least inducement to take life for gold, and organized thieves ramified into every settlement. It is a tradition of Denver that Mr. Greeley was so highly respected when visiting that place in 1859, that as he mounted a box to address the citizens near the Elephant Canal the dealer of three-card-monte on the sidewalk close by suspended his game until the speech was concluded. This was considered a most marked deference to the public appreciation of the man, and a tribute that few bishops could have now. So common was this fearful vice there, and in all the other Territories as they were first settled, that every public place on the streets and sidewalks but too successfully invited the miner to be defrauded of his earnings. I have, in a previous letter, referred in general terms to the reign and decline of crime in Colorado, and the stern retribution the Denver Vigilanters visited upon some of the most desperate leaders in lawlessness; but it was reserved for Montana to organize and maintain the most efficient combination of order-loving men that this country has ever witnessed. Just as Colorado had become strong enough to enforce some measure of public order and safety, the richest gulches of the continent were discovered in Idaho and Montana, and there was a general exodus of thieves and murderers from all the other mining regions, and also from the haunts of evil in the Eastern cities, to inaugurate the supremacy of crime in this new Eldorado. Four years ago, in June 1863, the surpassing richness of Alder gulch was discovered. With the lucky adventurers who opened its glittering wealth came

> "The first low wash of waves, where soon
> Shall roll a human sea."

Nevada was the first mining camp established. It is down near the extremity of the gulch; but as its wonderful deposits of the precious metals were opened up the stream, Virginia city was founded. It was called Varina, in honor of the then rebel chieftain's wife, and two-thirds of its inhabitants were jubilant with the hope soon to be subjects of the notorious heroes of treason Antietam, Gettysburg, Vicksburg, Atlanta, Nashville, Five Forks and Appomatox were then unknown to fame, and the fitting representatives of unholy rebellion in these mountain fastnesses had forgotten that there is One high over all, whose justice sleeps not. Little did they dream that, like the name they so fondly cherished as to rear thereto a city, they must soon live only in the history of the overthrow of wrong in Montana. Judge Bissel indignantly and arbitrarily expunged the name, and substituted Virginia as his first legal record, informing the bewildered audience, in language more emphatic than polite, that no such blot should mar the records of justice in this court. A year before the settlement of Virginia, the rich placers of Beaver Head and Deer Lodge had been discovered, and it was in these localities that the most perfectly organized and best appointed band of desperadoes ever known on the continent had its origin. Its system was perfect, its plans devised and executed with consummate skill, and it reached into every camp close upon the footsteps of the miner. While Bannock City was its original centre, as Virginia grew in importance and surpassed all other camps in wealth and population, it promptly extended its operations until its chief field was here. It was no loose aggregation of independent thieves and cutthroats. It had a commander, subordinate executive officers, secretaries, agents, stool-pigeons, signs, and by hieroglyphics could so mark a man, a coach, or a train, as to make them innocently invite their own destruction on the way. Certain of the leaders even wore their neckties in a peculiar knot, and by day or night, whether visible or shrouded in darkness, they could communicate with and aid each other. They were not, as in California and Colorado, the shunned and abandoned men of the communities in which they lived, they were the most wealthy, influential, and by many at first believed to be useful citizens. The leader of the band, Henry Plummer, was one of the most accomplished of villains, and a master-mind in the application and government of men, so shrewdly did he direct his operations, that he was chosen sheriff of both Madison and Beaver Head counties, and his deputies were selected from the most trusted and expert of his band. The counties had no legal organization; no authority was known other than the regulations adopted by the settlers, and might made right. With the power of the people in the two richest and most populous counties in his keeping, it is not wonderful that for nearly two years the band prospered and defied detection. So completely did the organization compass everything relating to their interests that every placer was watched, its yield traced to the time of shipment, and it was rarely, indeed, that any man could get safely to the States with treasure. They were, as a rule, lucky if they lost only their gold and saved their lives. If they started in a coach or with a train, unerring signs were marked upon them, or upon something about them, to notify the predatory bands to strike and secure the plunder; or, if vengeance was to be glutted, as was often the case, the traveller would unconsciously notify the skulking foe that his life-blood was to be theirs. Hundreds of thousands of dollars were thus plundered from miners and business men, and, if arrests were made, the prisoners were delivered to Sheriff Plummer, the chief of the robbers. They thus escaped punishment, and were soon off again to operate for the band in some new field, where recognition was improbable. This organization became known as "Road Agents," from the fact that they committed most of their depredations on the routes of travel, and to this day no other term is applied to highway robbery in the Far West. They numbered over fifty desperate men, all were armed, and most skilled in the use of weapons, and had besides probably a hundred or more outside allies and dependents. They would scatter in every direction, and simultaneously rob coaches, trains or travellers, hundreds of miles apart. They had stations all through the country, where they could stop in safety, as the keepers were pimps of the band and received small shares of the common booty. Thus these thousand sinews of crime ramified throughout all the settlements and highways of Montana, held the law paralyzed in their clutches, and were supreme every where in the Territory. Even when the civil law pretended to assume its prerogatives, this band either furnished or corrupted its officers, and no jury could be sworn that did not contain enough of their own members to control the verdict. Not only did they murder when necessary to rob, but they gradually became so bold that, upon the slightest provocation, they would deliberately shoot down men on the streets of Virginia, Nevada, or Bannock, and none dared to call them to account. Encouraged by habitual success, and confident that there was no power equal to the task of bringing them to punishment, they finally flung over Montana a reign of the most appalling terror, and men were compelled to defer to Plummer, obey his authority as an officer, and submit in silence to his atrocities to save their own lives. But though "the mills of the gods grind slowly, they grind exceeding fine." Many prominent citizens had been murdered or robbed, and the depredations of the band on the routes to the States were so frequent, that no one ventured to return with treasure. Every good citizen felt that there must soon be a terrible remedy applied, or all legitimate pursuits abandoned. Strange to say, the murder of one of the humblest residents of Montana—a simple, friendless German—was the feather that broke down public forbearance, and called into existence a power that has executed nearly 100 men, self-banished hundreds of others, and restored order, safety, and peace in Montana without a single stain of injustice upon its fame. The German was murdered to obtain some mules he had sold, and was on his way to deliver them to the purchaser, who had already paid him for them. He had been in the employ of Mr. Clark, an old resident of California, and a member of the Vigilanters there. The lifeless body had been secreted in a thicket of sage-brush, and the story circulated that the German had left for unknown parts with the mules and money. For some time there was no data to controvert the explanation made by the murderers; but, finally, a hunter brought down a grouse, it fell in the very thicket in which the body of the German was concealed, and told the story of another murder by the "Road Agents." The body was taken to the city, and Mr. Clark was the first man, I believe, to give form to the ripened resolution against the desperadoes. The effort was generally and promptly seconded, and, once started, its sweep was boundless and merciless. It was a perilous undertaking. A single failure would have been fatal to all concerned in it, and it was not doubted that the lawless were in a decided majority. Had any ten or even fifty men been suspected of such a purpose before the organization was effected, not one could have lived to see their plans succeed; but they were discreet as resolute, their vengeance was unseen and unfeared until it took the murderer from his bed, and the light of morning dawned upon his lifeless body suspended from a tree. There was no muttering thunder before the terrible bolt fell with pitiless destruction upon the wrong-doers. Of the many brave men who inaugurated and openly sustained this movement, no one can justly be awarded exclusive praise; but there is one who figures as conspicuously in the history of the Vigilanters as did Plummer in the reign of terror. Some twelve years ago I was accustomed to meeting on the streets of Chambersburg, Pa., a young man, named John X. Beidler. His frugal wants were supplied by the manufacture of brooms, and finally he mixed the best cock-tails and juleps at a neighboring summer resort. He was as amiable and unoffending a lad as the community could furnish, and his jolly, genial humor made him a favorite with all who knew him. Although he had attained his majority, he was scarcely five feet six inches in height, and was far below the average of men in physical power. He finally wandered West in search of fortune, and soon after the advent of Plummer came "X," the only name by which he is universally known in Montana. Thus the bane and the antidote were close upon each other. Strong in his inherent love of honesty, a stranger to fear, not powerful, but quick as thought in his actions, and firm in his purpose as the eternal mountains around him, he naturally entered promptly and earnestly into the effort to restore order and safety to society. That little was expected of him when he first cast his lot with the stern reformers is not surprising, but his tireless perseverence, unfaltering courage, and singular skill in thwarting the plans of the common enemy, soon made him the chief pillar of the organization, and the unspeakable terror of every desperado. This diminutive man, without family or property to defend, has himself arrested scores of the most powerful villains, and has executed, in open day, an equal number under the direction of the wonderful fountain of retribution that was unseen but was surging around the hasty scaffold. So expert is he with his faithful pistol that the most scienced of rogues have repeatedly attempted in vain to get "the drop" on him. Quick as a flash his pistol was drawn, cocked while drawing it, and presented to the doomed man with the stern demand, "Hands up, sir!" and the work is done. At one time, without aid, he arrested six of the most desperate thieves in a body, all well armed, and marched them before him to prison. "Hands up, gents!" was the first intimation they had from him that he had business with them, and submission was the only course of safety. Laid any one of them attempted to reach towards his belt, he would have fallen that moment. There were citizens close by, and how many of them, if any, were sworn to protect and ready to aid Beidler, he knew while the prisoners did not. This indefinite, unseen, immeasurable force seems to have ever stricken the most courageous thieves and murderers nerveless, when its sudden and fatal grasp was thrown around them. They would fight scores of men for their lives in any ordinary attempt to arrest them, but they were invariably "weakened" when the citizen confronted them in the name of public safety. No formalities were known. No process was read bearing the high seal of the courts. When, or where, the dread summons of the great unseen tribunal would come, none could conjecture. The sleeping companion of the desperado in some distant ranche would probably drink and breakfast with him, and then paralyze him by the notice, "You're wanted—business at Virginia!" In no instance did any of the many lawless characters arrested by the vigilants, even fire a pistol in their own defence, even when they knew that death was inevitable. In most cases the opportunity to do so was but slight, but under all ordinary circumstances, the narrowest chances would be taken to effect escape. From "X" no criminal ever got away. To have attempted it would have been but to hasten death. So much did the desperadoes respect, as well as fear him, that most of them, when condemned to die by his hand, committed their last requests to him, and with him they have been sacred. Order and public safety have been restored, but he still has employment in his favorite line. He continues to act as the chief detective of the territory. He comes and goes, and none but himself know his errand. "What's up, X?" is a query that is generally answered, "after tracks," and "don't know" is his usual reply to all questions as to his route or time of departure. He has traversed alone every highway and settlement of Montana, prospected many of the unexplored regions, and is ever ready, without escort or aid, to pursue a criminal wherever he may seek refuge. His career has, indeed, been most remarkable, and his escape unharmed through his innumerable conflicts with the worst men, seems almost wholly miraculous. He has recently been appointed Collector of Customs for the port of Helena, but while there is a thief, a defaulter, a murderer, or a savage to disturb the peace of Montana, he will remain the most efficient messenger of justice known in the mountain gold regions. He has lost none of his genial, kindly nature by his long service as the bearer of relentless retribution upon the lawless, and wherever he goes he is welcomed by every lover of order and government. When he is upon the war path "it's no for naething the gled whistles," and crime has no escape but in timely retreat. Fully 3,000 perfectly organized men are at his back. They have their companies, officers, minute men and messengers in every settlement, and he can rally in an instant scores or hundreds of true men to his side. The first execution was that of George Ives, and he was condemned by a court of the people. It was the turning point of order or anarchy. The outlaws were numerically the strongest, and the rescue of the prisoner was among the probable results; but brave men were braver than ever before, and the cloud of crime that encompassed the court to control the verdict, or save the accused by fresh murder, was dissipated by the stern integrity and unblanching courage of the lovers of order. Col. Sanders, a young advocate, small in stature, but large in soul and manhood, conducted the prosecution, and for the first time the advancing column of wrong recoiled as the verdict was announced: "That George Ives be forthwith hung by the neck until he is dead." Fifty-eight minutes thereafter, but ten yards distant from the place he sat on trial, the fatal drop fell, and justice had a foothold in Montana. This

was on the 21st of December, 1863. Soon after Sheriff Plummer and two of his band were executed together at Bannock. He swung from a gallows he had erected for the execution of another, and he maintained his wonderful self-possession to the end. His last act was a deliberate examination of the rope and drop, to be sure that his neck should be broken by the fall, and he was launched into eternity without a prayer. Five of his followers sleep in unmarked graves on the hill close by this city, who died together on one of the street corners, and then the resistless course of justice ran, until, at last, near the head of the murmuring waters of the Gallatin, a lifeless body suspended from a tree bore this inscription: "Bill Hunter, the last of Henry Plummer's band." Several of those first arrested and executed confessed upon the gallows, and revealed the names of the whole organization; and with this information they rested not until there was not one of the original Plummer band among the living. Not one remains of that once omnipotent organization to tell its crimsoned and fatal history. After the leaders had been executed—three at Bannock, and five at Virginia—one by one the scattered and fleeing fugitives were hunted down and sent suddenly to their long homes. All of them died without even the profession of penitence, and many of them blasphemed until their utterance was choked by the death noose. Two of them leaped high in the air from the gallows, to hasten their presence before an unreconciled and avenging God. In these men self-banishment was considered no atonement. Thousands of dollars were expended to pursue those who fled hundreds of miles to escape this merciless retribution, but all in vain. When they felt safe in their isolated retreats, the hand of the Vigilants would swoop down upon them, and they would find graves, unshrived and unmourned, wherever the ministers of offended justice crossed their path. Some had climbed the narrow passes to Idaho and Oregon; others had passed for refuge to California, and even South America has been tried in vain as a retreat from this colossal current of vengeance. All, all have been fruitless. The solemn judgment of the unseen tribunal must be executed, though the ends of the earth have to be searched for the guilty victim. Not only justice inflexibly demanded it, but common safety was equally imperative in exacting that none once condemned should escape. They could infest the thousand miles of unpeopled plains and mountain canons between this and the States, where the ministers of justice must sometimes travel, and no one was left to renew the vengeance of crime. They made themselves and the public safe by ceaseless pursuit, until the murderer lived only where all are judged in righteousness. Nor is their work wholly of the past. Although unseen and unknown, their sleepless eyes guard the Far West with tireless vigilance. No desperado can ascend the Missouri without his name, description, and antecedents, either preceding or coming with him, and every settlement will have its faithful sentinels to challenge him on his arrival. There is no pomp or parade in their proceedings, and most who would fear them naturally suppose that they have disbanded as an organization, but the hapless rogue who lands in Montana will have the ardor of his hopes speedily chilled by some unknown friend bidding him good-bye, and suggesting that he must depart without delay. No explanation is given—none is needed, and Montana loses a citizen she can better spare than keep. Many miles from this place I saw a doomed man - doomed to death by this matchless human agency, and conscious of it. He was a prisoner in the hands of the law. He could escape, but dare not; for around him are the silent and unknown sentinels of a tribune that has no technicalities in its trials. He may escape the cobwebs of the civil law, but the world is too small to afford him an asylum, and he lies from day to day in hopeless despair. Some hour, not distant, he will go unwept to his final resting-place, and none will inquire why he has gone so untimely. Such is a brief and necessarily imperfect history of the triumph of justice in Montana. The civil courts are now in operation, but without the power of the Vigilants crime would soon regain the ascendency. Their organization is maintained as an auxiliary to the courts, and to reach out the arms of justice where the civil power is unequal to the task. Should the law ever prove too feeble for the support of order, then will the fiat of 3,000 men rush to the public safety. So inflexible have they been that no means, no ties, no circumstances, could shield the guilty. One of their own number was found to have sought shelter from just punishment in their "circle," and he was executed from their midst. In another instance the friends of the condemned proposed to make restitution of the stolen property, if the sentence could be changed from death to banishment; but the criminal was one of the robber's band, and the restitution was made by the Vigilants, and the robber sent to his grave. In three years of operations, covering nearly 100 executions, this organization is not to-day charged, by friend or foe, with partiality or prejudice, or with a single unjust punishment. Sternly, patiently, unerringly, it has prosecuted its unwelcome labor, and its history is but the history of the supremacy of virtue, order, and justice in Montana.

Concrete Stone.

A company for the manufacture of concrete stone has been formed at St. Louis. It is claimed for this stone that it will last as long as cut stone, will have a finer surface and will never crumble or become soiled. Also, that keystones, brackets, mantles, and copings of this material will only cost from one-third to one sixth as much as cut-stone, while for plain work it will be cheaper by one-half. The process of manufacture is thus described by the St. Louis *Times*: "The raw quartz is first broken up and put in boilers, where, under a strong pressure of steam, it is reduced to a liquid silicate of soda of the consistence of milk, passed off to a tank, where the water is evaporated, leaving it of the color and quality of mucilage. The sand is now mixed with it in a common pug-mill, when it is moulded into the desired form, and then saturated in a solution of chloride of calcium, rendering it hard and compact. If a large block, it is subjected to a pressure under a vacuum, where it is injected with chlorine. After the stone is thus treated it is washed to free it from the salt formed by the union of chlorine and soda, and then dried by evaporation. It is then ready for use."

A Pilgrim City.

The terminus of the Union Pacific Railroad is——wherever it stops, for the time being. North Platte enjoyed the distinction for a few weeks, and grew considerably on the strength of it. Now the terminus has pushed forward, and the citizens, who have no idea of being behind-hand, are pulling up stakes and following the trail *en masse*, or, as one might say, in Platte-oons. The North Platte *Index* of the 25th says: Our city is disappearing as if by some mighty feat of jugglery, and the busy scenes of trade have given way to the sound of the axe and hammer, tearing down houses and business places, which will soon be seen again eighty miles west of here, at Julesburg. It is a novel sight to see a whole town packing up and "walking off" in a single day. Nearly every man who has been engaged in business here is going into business at Julesburg, and most of them on a much larger scale than here, and in one week from this time we shall see Julesburg a lively business town, larger than was North Platte! The next number of the *Index* will be published at Julesburg.

MARKET REVIEW.

FRIDAY EVENING

Gold and Silver Stocks.—At first board Corydon sold at $1.10@$1 15; Edge Hill, s.3, $2 90; Sensenderfer, s.20, $12 10; American Flag sold at 95c; Benton, 1 00. At second call, Consold. Gregory sold b. 30@$7 00; after call, s.10, $6 99; Harman, G. & S. $7 75; Edge Hill sold regular, at $2 70 and s.3. $2 70@2 80; N. Y. Gold, s.3. $1 10; N. Y. and Eldorado, b.30, $2 60@$2 65. Quartz Hill, $1 70@$1 75.

	August 23. Offered.	Asked.	August 16. Offered.	Asked.
Alameda	1 40	....	1 25	3 00
American Flag	....	1 00	90	....
Atlantic and Pacific	1 05	1 75	1 25	2 50
Bates & Baxter Gold	....	1 50	75	1 50
Benton Gold	1 00	1 10	....	1 15
Bobtail Gold	....	3 00	....	3 00
Bullion Consolidated	....	1 00	....	1 00
Columbian G. & S.	1 00	1 15	1 00	1 05
Consolidated Colorado	....	....	....	....
Consolidated Gregory	6 90	6 95	6 60	6 70
Corydon	1 15	1 20	1 10	1 15
Des Moines Gold	....	....	....	....
Downieville Gold	....	....	2	7
Edgehill Mining	2 80	2 95	2 50	2 55
Gold Hill	....	4 00	....	4 00
Gunnell Gold	2 50	3 00	2 50	2 75
Gunnell Union	10	25	10	25
Harman G. & S.	7 50	7 75	7 00	7 75
Holman	....	20	13	15
Hope Gold	....	40	....	50
Kipp & Buell Gold	45	....	45	55
La Crosse Gold	....	90	75	80
Liberty Gold	4	6	4	7
Manhattan	....	110 00	90 00	....
Midas	2 35	2 40	2 25	2 30
Montana Gold	15	....	22	....
New York	1 10	1 20	1 10	1 15
New York & El Dorado	2 55	2 60	2 60	2 65
Nye Gold	4	6	5	6
Owyhee Mining	50 00	65 00	50 00	70 00
People's G. & S. of Cal	35	....	35	40
Quartz Hill	1 70	1 75	1 85	1 90
Reynolds Gold	....	6	3	5
Rocky Mountain Gold	1 30	1 40	1 45	1 50
Seaver Gold	11 00	12 50	....	13 50
Smith & Parmelee Gold	5 45	5 60	5 35	5 45
Sensenderfer	12 00	....	....	12 50
Symonds Fork	....	1 00	....	1 00
Texas Gold	11	18	7	18
Twin River Silver	....	70 00	17 00	50 00
Vandeburg	....	75	60	....
Yellow Jacket Gold	....	30	....	50

Copper Stocks.—At first board, second call, Davidson gold, regular, and s. 3, at $2 10

	August 16. OFFERED.	ASKED.	August 23. OFFERED.	ASKED.
Caledonia	....	10 00	....	10 00
Canada Copper	20	25	....	....
Central Copper	21 50	....	21 50	....
Charter Oak Copper	....	7 00	....	7 00
Davidson Copper	2 00	2 10	2 10	2 15
Hilton Copper	....	1 00	....	1 00
Hancock	6 50	7 50	6 50	7 50
Evergreen R. Copper	....	....	....	....
Isle Royale	....	6 00	....	6 00
Knowlton	....	4 00	....	4 00
Rockland Copper	....	7 50	....	7 50

Petroleum Stocks.—Buchanan Farm sold at 26c at the board.

	August 16. Offered.	Asked.	August 23 Offered.	Asked
Bennehoff Run	2 90	3 00	3 50	5 00
Buchanan Farm	25	27	25	27
Brevoort	....	....	60	90
Central	1 00	1 05	....	1 00
Cherry Run Special	....	....	....	5
Clinton Oil	90	1 50	....	1 50
Excelsior	5	15	5	15
Manhattan	....	15	....	20
N. Y. and Alleghany	3 00	4 00	2 75	3 50
Pit Hole Creek	25	50	....	50
Rynd Farm	10	....	15	20
United Pet. Farms	10	....	10	20
United States	3 00	3 45	3 20	3 40
Union	1 30	....	....	....

Miscellaneous Stocks.—Cumberland Coal, pref., 35; Delaware & Hudson Canal, 148; Quicksilver, 27½@28½; Pacific Mail Steamship Co., 147½; West. U. Tel., 43@43½; Reading R., 140; Erie, 69¼; Merchants' Union Express, 39, c.p. 17; Adams' Express, 74¼; Rutland Marble, 39 00 asked; Wallkill Lead, 46 @48.

Government Stocks.—Are firm.

U. S. 6s, 1867	108 @ —
U. S. 6s, 1868, regular	107 @ —
U. S. 6s, 1868, coupon	107 @ —
U. S. 6s, 1881, coupon	110¾@111
U. S. 6s, 5-20s, 1862, regular	108½@109
U. S. 6s, 5-20s, 1862, coupon	113⅝@113¾
U. S. 6s, 5-20s, 1864, coupon	109¼@109⅝
U. S. 6s, 5-20s, 1865, coupon	110⅛@110½
U. S. 6s, 5-20s, July, 1865, coupon	108 @108½
U. S. 6s, 5-20s, July, 1867, coupon	108¼@108⅝
U. S. 5s, 1871, reg	— @117
U. S. 5s, 1871, coupon	118 @119
U. S. 5s, 1874, reg	— @109
U. S. 10-40s, reg	98⅝@99⅛
U. S. 10-40s, coupon	102⅜@102¾
U. S. 7 3-10s, Augus:, small	107 @107⅛
U. S. 7-30s, August, large	107⅛@107¼
U. S. 7-30s, June, large	107¼@107½
U. S. 7-30s, July, large	107⅛@107¼

Foreign Exchange—Is quiet. There is very little demand from importers, and although the supply of bills is limited, it exceeds the wants of the market. The following are the current quotations, at which the market may be reported weak:

London, (prime bankers') 60 days'	109⅛@109⅜
London, (prime bankers') sight	1 0 @110¼
London, prime commercial	109⅛@109½
Paris, (bankers') long	5.17½@5.15
Paris, (bankers') short	5.15 @5.12½
Antwerp	5.18¾@5.17½
Swiss	5.18¾@5.17½
Hamburg (bankers')	35½@36¼
Amsterdam (bankers')	41¾@—
Frankfort (bankers')	41 @41⅝
Bremen (bankers')	78⅜@78⅝
Berlin (bankers')	72 @72⅝

Gold 140¼ @ 140⅞

Copper—Has been in more demand, sales foot up, since our last, to between 7,500 and 1,000,000 pounds. Last sales for immediate delivery, were at 25¾ for Portage Lake—an advance of one half per pound—and 25¼ for Baltimore. Detroit has advanced in about the same proportion.

Iron—The market in Iron as well as in the other metals, has been more active. We note the sale of 500 tons, American, at $44. Scotch is quoted at about 50c. higher, all round. Gartsherrie $44½; Glengarnock and Eglinton, $43; Summerlee, $42½. Wm. Oothout reports as follows: Swedish Iron, $155@165; common, $80@95; refined, $100@105; band, 13½; horseshoe, $127½; rods, 3-16 to ⅝, $165@105; ovals, ¾ to 1½, $165@127; nail rods, 9@10¼c.; hoop, ⅝ to 2, $192@½137½; scroll, $132½@180.

Lead.—Unchanged; the market has been quiet but firm, $6½@6⅝ for ordinary soft; White Lead brand, 6¾; Galena, 9¾@9½.

Tin.—We note sale of ten tons English at 23; 200 pigs Straits at 24@25, according to quality; Banca 26½@26¾.

Tin Plates—No change. Moderate sales of I. C. Chl., $9 25@9 50; $7 50@ $8 50, Coke, with an upward tendency.

Spelter.—We quote sales of 50 tons Silesian at 6¼c, gold; American unchanged.

Petroleum is quiet. We quote as follows: Crude (40 to 47 gravity) in bulk, per gallon, 12½@13; crude (40 to 47 gravity) in bbls. 18; refined in bond, (110 test), prime light straw to white, 25@26; refined in bond, (110 test) standard white, 27½@28; refined in bond (110 test), prime white, 30; refined free (110 test), standard white, 48@49; refined naptha (60 to 81 gravity) 20; residuum, per bbl, $3. The Atlantic Cable reports: Antwerp, Aug. 22—Noon—Petroleum, 43f. for standard white. The export of petroleum from the leading Atlantic ports from January 1, 1867, to August 1, 1867, is as follows:

	1867. Gallons.	1866. Gallons.
Boston	1,277,662	995 144
Philadelphia	17,717,490	13,926,148
Baltimore	1,076 781	1,387,308
Portland	.....	405
New York	17,911,304	17 932,158
Total	37,983 237	34,241,163

THE COAL TRADE.

NEW YORK, Aug. 22, 1867.

Whol sale.—Trade moves along slowly with very little variation in prices. Freights remain unchanged. The principal event of the week was the Pittston sale, which took place on Wednesday, and at which 30,000 tons were sold at an average decline of about twenty cents per ton as compared with their last sale. In common with dealers generally, we were surprised at this decline from the fact that there was some inquiry for the larger coal prior to the sale, the great decline that has recently taken place in the total shipments by the principal carrying companies, and in the face of interruptions to transportation by the recent heavy rains. We think the figures below show the *lowest prices* at which coal will sell this year. Below will be found a complete report of the sale compared with that of July 17:

PITTSTON SALE.

August 21.		July 17, 26,000 tons.	
STEAMBOAT.			
7,000 tons.		5,000 tons.	
500 tons	$4 65	2,500 tons	$4 85
7,000 tons	4 70	2,500 tons	4 90
BROKEN.			
7,500 tons.		5,000 tons.	
700 tons	$4 75	2,900 tons	$4 75
500 tons	4 70	400 tons	4 77½
200 tons	4 65	600 tons	4 80
2,900 tons	4 60	1,100 tons	4 87½
1,700 tons	4 57½		
1,000 tons	4 50		
500 tons	4 40		
EGG.			
7,500 tons.		5,000 tons.	
3,300 tons	$4 37½	1,125 tons	$4 30
150 tons	4 30	2,000 tons	4 35
2,850 tons	4 25	1,675 tons	4 50
400 tons	4 20	100 tons	4 55
800 tons	4 15	100 tons	4 60
STOVE.			
7,500 tons.		9,000 tons.	
500 tons	$4 45	7,000 tons	$4 70
200 tons	4 40	1,500 tons	4 75
600 tons	4 35	200 tons	4 77½
250 tons	4 32½	300 tons	4 85
5,950 tons	4 30		
CHESTNUT.			
None.		200 tons	$3 80
		1,800 tons	3 95

The fifty-third auction sale of Scranton coal is to take place on Wednesday, the 28th inst., at the company's salesrooms, 26 Exchange Place; 75,000 tons are to be disposed of. (See avertisement.)

Retail—Trade has been dull during the past week, and has received a further *quietus* by the Pennsylvania Coal Company reducing the prices of the Pittston coal to $6 per ton from their several yards. Many dealers have full stocks on hand, and this will not be agreeable news to them.

The following Table shows the quantity of Coal shipped over the principal roads for the week ending August 17, 1867, compared with that shipped the same time last year.

	1866. WEEK.	1866. TOTAL.	1867. WEEK.	1867. TOTAL.	DECREASE.
Phil. & Reading R.R.	88,278	2,432,651	51,743	2,042 231	390,422
Schuylkill Canal	34 374	814,251	23,748	590,158	224,093
Lehigh Val. R. R	43,367	1,212,714	38,718	1,281,375	68,659
Lehigh Canal	32 805	562 138	19,236	511 340	50,797
Del & Hudson	37 023	778,085	31,009	762,498	15 587
Scranton North	9,083	262,939	10,524	258,491	4,448
Scranton South	22,782	661,602	27,520	806 659	144,957
Penn'a Coal Co. Rail	18,019	180,571	20,658	498,786	318,215
" " Canal	1,068	14,136	478	12,273	1 863
Wyoming North	.....	.....	.....	.....	.....
Wyoming South	.....	246,927	17,102	165 358	81,169
Shamokin	16,076	353,550	19 407	300,318	53,032
Trevorton	1,329	31,979	345	36,563	4,584
Short Mountain	3,386	49,495	2,185	40,993	1,502
L. V. Co	1,885	36 202	1,954	37,917	1,655
Broad Top	5,434	168,761	4,427	146,684	22,077
Williamsto'n	2,297	26,672	4,058	59,114	32,442
Total	317,306	7,832,823	262,949	7,551,156	.....
1867	262,949	7,551,156	.....	.....	.....
Decrease	44,357	281 667	.....	.....	.....

Schuylkill Coal Trade.

BY RAILROAD & CANAL, FOR WEEK ENDING AUGUST 22, 1867

	Railroad.	Canal.
St. Clair	13 089	.....
Port Carbon	3,359	.....
Pottsville	118	.....
Schuylkill Haven	5,828	.....
Auburn	1,824	.....
Port Clinton	302	.....
Total for week	24,520	4,468
Previously this year	2,042,247	593,142
Total	2,066,767	593,610

Lehigh Coal Trade.

SHIPPED FOR THE WEEK ENDING AUGUST 17, 1867.

SHIPPERS.	CANAL. Week. Tons.	CANAL. Total. Tons.	RAILROAD. Week Tons.	RAILROAD. Total Tons.
FROM MAUCH CHUNK.				
Lehigh Coal & Navigation Co.	....	....	....	....
Summit Mines	6,425	177,950	....	....
Room Run Mines	....	1,319	....	....
John Laubach & Co.	....	352	....	....
Other Shippers	....	....	....	....
Total	6,425	179,625	....	....
FROM B. M. REGION.				
John Connery	....	....	....	1,534
W. T. Carter & Co. (Coleraine)	574	5,797	1,069	56,538
Spring Mountain Coal Co.	....	1,352	1,584	83,082
Thomas Hunt & Co. (N. Y. & Lehigh Co)	193	6,296	2,568	66,668
Honey Brook Coal Co.	918	19,226	729	91,563
German Pennsylvania Coal Co.	66	5,340	5	24,025
Beaver Meadow (D. W.)	....	....	....	1,021
Other Shippers	....	....	5	106
Total	1,752	37,922	5,902	330,563
FROM MAHANOY REGION.				
McNeal Coal and Iron Co	95	3,375	1,663	63,300
Knickerbocker Anthr. Coal Co.	....	1,327	875	34,197
North Mahany Mines (Mahanoy Col. now B. & C.)	....	636	99	10,637
Delano do	....	1,048	472	32,172
Primrose Mines (Rathbun, Stearns & Co.)	....	....	717	25,625
Walter, Brothers & Co. (now Bedford & Cox)	....	82	....	....
Mount Etna Coal Co.	....	....	....	58
Trenton Coal Co.	....	184	....	1,609
Glendon Coal Co. (Glendon Colliery)	....	....	31	13,062
Thomas Coal Co.	94	1,256	611	19,838
Williams & Herring	....	189	14	8,818
E. S Silliman	....	....	946	67,847
East Boston	....	....	....	505
New Boston Coal Co.	....	....	1,006	12,043
Shamokin Coal Co.	....	....	158	2,352
Other Shippers	....	....	....	95
Total	120	8,051	6,575	292,160

FROM HAZLETON REGION.				
A. Pardee & Co. (Hazleton)	1,272	39,825	4,147	82,850
G. B. Markle & Co. (Jeddo)	1,456	28,637	2,884	76,409
Wm. S. Halsey & Co. (Mt. Pleasant)	....	2,682	432	4,724
Buck Mountain Coal Co.	791	24,944	1,289	31,854
Sharpe, Weiss & Co. (Council Ridge)	630	17,744	1,593	47,891
Coxe, Brothers & Co. (Cross Creek)	339	5,698	287	11,329
Ebervale Coal Co	1,103	20,642	2,403	42,880
Stout Coal Co.	487	12,236	680	19,923
Harleigh Coal Co.	849	10,124	1,279	23,627
Ashburton Coal Co.	92	1,423	....	1,432
East Sugar Loaf	....	....	4,442	81,634
Woodside	....	....	....	....
Highland	689	7,413	772	10,407
Mount Hall	....	88	....	311
Other Shippers	....	....	....	10
Total	7,706	171,511	20,519	434,278
FROM WYOMING REGION.				
Newport Coal Co	....	3,533	....	783
Warrior Run Mining Co.	....	2,056	482	6,319
Parish & Thomas	....	5,528	612	26,637
New Jersey Coal Co.	129	3,955	....	10,851
Lehigh & Susquehanna Coal Co.	....	2,933	....	11,245
Germania Coal Co.	89	5,272	473	9,905
Franklin Coal Co	92	5,316	....	8,763
Anderonied Impr'v't & Coal Co.	....	4,149	354	6,568
Valley Coal Co.	....	189	32	584
Wilkes Barre Coal and Iron Co.	2,094	42,271	861	45,099
Baltimore Coal Co.	316	12,816	488	28,709
Union Coal Co.	223	5,323	....	7,642
Wyoming Coal & Transp'n Co.	....	5,755	461	16,182
Everhart Coal Co	....	2,525	....	1,204
Morris & Essex Mutual	....	....	71	5,295
B. B. Hillman & Co	....	....	51	6,703
Bowkley, Price & Co.	....	....	....	1,745
T. F. Hunt & Co	....	....	....	774
C. Lehigh Coal Co.	216	6,900	1,515	28,015
Mineral Springs	....	....	319	934
Other Shippers	....	5,980	....	....
Total	3,162	114,189	5,720	224,365
Grand Total	19,236	511,340	38,718	1,281,373
Total 1866	32,805	562,138	43,367	1,212,714
Decrease	13,569	50,797	4,649	....
Increase	....	....	....	68,659

RECAPITULATION.

RAILROAD.

	Forwarded East by Rail from Mauch Chunk.	Delivered at M. Chunk, and on line of road at that point.	Total by Rail.	Delivered at P. H. Junction and Mauch Chunk for Canal.	Total by Rail from and Canal.
	Tons.	Tons.	Tons.	Tons.	Tons.
For the week	38,718	.....	38,718	621	39,340
Cor'ng week last year	43,767	61	43,429	8,505	51,935
Previously this year	1,242,954	12,088	1,254,742	47,165	1,301,906
Total	1,281,375	12,088	1,293,461	47,785	1,341,246
Same time last year	1,213,714	700	1,213,414	167,111	1,380,525
Increase	167,659	11,388	80,047	.....	.....
Decrease	.....	.....	.....	119,326	39,279

CANAL.

	Week.	Season.
Total from Mauch Chunk	6,425	179,625
" E. M. Region	1,752	37,922
" From Mahanoy Region	190	8,081
" Hazleton Region	7,706	171,511
" Wyoming Region	3,162	114,199
Total	19,236	511,340
Same time last year	32,805	562,138
Increase	.....	.....
Decrease	13,569	50,797

Lehigh and Mahanoy Coal Trade,

For week ending August 17, 1867.

NAMES OF SHIPPERS.	WEEK.	TOTAL.
Trenton Coal Co	.....	1,791 02
Mount Etna	.....	43 04
Mahanoy Coal Co.	99 00	10,782 14
Delano College	472 06	33,360 09
Glendon Coal Co.	31 05	12,985 12
Rathburn, Stearns & Co.	717 19	25,431 01
E. S. Silliman	946 06	68,481 15
McNeal Coal & Iron Co.	1,663 13	66,523 06
Knickerbocker Coal Co.	743 08	35,574 05
Thomas Coal Co.	611 12	20,775 01
Williams & Herring	14 11	8,996 08
Shamokin Valley Coal Co.	138 19	2,352 18
New Boston	991 12	12,044 13
Other shippers	.....	15 11
Total	6,450 11	299,163 19
Corresponding week last year	9,054 18	248,508 15
Increase	.....	57,655 04
Decrease	2,604 07	.....

Cumberland Coal Trade.

For the week ending August 17, 1867.

From the Alleganian.

COAL TRADE BY RAILROAD.—Statement of Coal shipments over the Baltimore and Ohio Railroad for the week ending August 17, 1867:

	Tons.
From C. and P. R. R.	
Consolidation	1,742 09
American Company	1,497 05
Borden	876 05
From Eckart R. R.	Tons.
C. C. and I. C.	376 00
Spruce Hill	.....
Black Aven	221 09
Total	4,713 08
From George's Creek via Piedmont.	Tons.
George's C. & I. Company	2,997 19
Central do	1,093 10
Atlantic do	455 15
Piedmont do	209 08
Swanton do	395 15
Barton do	1,265 14
Potomac do	1,154 15
George's C. M do	469 05
Franklin do	684 00
Hampshire do	1,476 11
Total	8,318 02

In consequence of the break on the Canal, coal shipments have been temporarily suspended, and we therefore have no report.

Wyoming Coal Trade.

By Canal for week ending August 21, 1867.

South	11,312 tons
Previously	165,758 "
Total	177,270 "
To same time 1866	263,152 "
Decrease	85,882 "

Prices of Coal by the Cargo.

[CORRECTED WEEKLY.]

At New York, August 21, 1867

Schuylkill Red Ash, choice	$5 75@	$6 00
" Ordinary	5 25	5 50
" White Ash Lump	5 25	5 50
" Steamboat	5 25	5 50
" Broken	5 25	5 50
" Egg	5 25	5 50
" Stove	5 25	5 50
" Chestnut	4 00	4 25
Lehigh White Ash Lump	5 75	....
" Broken	5 50	....
" Egg	5 50	....
" Stove	5 75	....
" Chestnut	5 00	....
Wilkesbarre Lump	5 25	....
" Broken & Egg	5 50	....
" Stove	5 50	....
" Chestnut	4 75	....

SPECIAL COALS.

Dealers' Quotations.

Diamond Vein Red Ash, Schuylkill	6 00	....
Locust Dale White Ash, "	5 50	....
Honey Brook " " Lehigh	5 75	....
Harleigh " " "	5 75	....
Spring Mountain " "	5 75	....
Sugar Creek " "	5 75	....
Ashburton " "	5 75	....
Fulton White Ash	5 75	....
Stout	5 75	....
Old Company's "	5 75	....
Buck Ridge " " Shamokin	6 00	....
Henry Heils, E. Franklin, Lorberry	6 00	....
New England Red Ash	5 75	....
Broad Mountain	5 50	....
Wyoming	5 40	....
McNeal Co.	5 75	....
George's Creek (Balt.)	5 25	....
" " (Georgetown)	5 75	....
Locust Mountain (Reppher)	5 60	....
Duncan Red Ash "	6 50	....
Wilkesbarre Coal & Iron Co.	5 50	....
New Burgh Orrell Gas Coal	9 25	....
Despard Gas Coal	9 25	....

Dealers in these Coals may be found in our advertising columns.

At Philadelphia, August 23, 1867.

Lehigh Lump and Steamboat	$5 25@	....
" Broken and Egg	5 25	....
" Stove	5 25	....
" Chestnut	4 00	....
Schuylkill Red Ash Prepared	4 50	4 75
" Chestnut	3 00	....
" White Ash Lump and Steamboat	4 25	....
" Broken	4 25	....
" Egg and Stove	4 25	....
" Chestnut	3 15	....
Locust Mt. Lump, and Steamboat	4 25	....
" Broken	4 25	....
" Prepared	4 25	....
" Chestnut	3 00	....
Lorberry Coal	4 50	....
Shamokin	5 00	....
Franklin, (Lykens Valley)	5 25	....
Broad Top	5 00	....

Scranton Coal at Elizabethport, August 22, 1867.

(Corrected weekly by D. L. & W. R. R. Co.)

Lump	$4 75@	—
Steamer	4 75	—
Grate	4 75	—
Egg	4 75	—
Stove	5 00	—
Chestnut	4 50	—

Prices for Pittston Coal at Newburgh, August 22, 1867.

(Corrected weekly by Penna. Coal Co.)

Lump, per ton of 2240 lbs	$5 05	....
Steamer, " " "	5 15	....
Grate " " "	5 15	....
Egg " " "	5 15	....
Stove " "	5 50	....
Chestnut "	4 25	....

70 cents additional to New York.

Lackawanna at Rondout, August 22, 1867.

(Average contract prices for year.)

Lump	5 60 @	....
Steamer	5 10 @	....
Grate	5 30 @	....
Egg	5 40 @	....
Stove	5 55 @	....
Chestnut	4 60 @	....
Pea	4 00 @	....

Lehigh Coal at Elizabethport, August 22, 1867.

Lump	5 75@	....
Steamboat and Broken	5 50	— —
Egg	5 50	— —
Chestnut	5 00	— —
Stove	5 75	— —

At Baltimore, August 22, 1867.

Wilkesbarre & Pittston W A	$5 25@	— —
Lykens Valley & Sunbury R A	5 50	— —
Shamokin W. or R. A.	5 50	— —

George's Creek and Cumberland Coal.

Run of mine, f. o. b. at Locust Point at Georgetown ..... $5 00@ 5 25

Wilkesbarre Coal at Elizabethport, August 21, 1867.

(Corrected by Wilkesbarre Coal & Iron Co.)

Lump	5 00	....
Steamer	5 25	....
Broken	5 25	....
Egg	5 00	....
Stove	5 35	....
Chestnut	4 50	....

Prices of Provincial Coals.

[CORRECTED WEEKLY BY LOUIS J. BELLONI, JR., 43 PINE STREET.]

Duty $1.25 per ton.

Block House (on board)	$2 00	gold
Gowrie "	1 75	"
Lingan "	1 75	"
Sydney "	2 25	"
Pictou "	2 25	"
Little Glace Bay "	1 87½	"
International co.'s "	1 75	"
Slack Coal, B. H., "	75	"
" L. G. B., "	1 00	"

Prices of Foreign Coals.

Duty $1.25 per ton.

Corrected weekly by FARMELEE BROS., 32 Pine Street, N. Y.

Liverpool Gas Caking	$10 00
" " Cannel	13 00
" House "	16 50
" " Orrel	15 00

Per ton 2240 lbs.

PRICES FROM YARD

Liverpool Orrell, screened	17 00@
" Cannel, "	20 00@

per ton 2000 lbs. delivered.

Coal Freights.

(Corrected Weekly)

From Newburgh.

RIVER.	Co.'s BOATS.	EASTERN	
Albany	50@	Boston	1 80@
Barrytown	35	Bridgeport	1 12½
Catskill	35	Bristol	1 50
Cold Spring	30	Dighton	1 50
Coeymans	45	Fall River	1 45
Coxsackie	40	Mystic	1 70
Fishkill Landing	20	New Haven	1 12½
Greenbush	50	New London	1 30
Hyvestraw	45	Newport	1 45
Hudson	35	Norwalk	1 12½
New York	70	Norwich	1 40
Nyack	50	Pawtucket	1 65
Peekskill	40	Providence	1 50
Poughkeepsie	25	Stamford	1 12½
Rhinebeck	30	Stonington	1 30
Saugerties	35	Warren	1 45
Sing Sing	50		
Stuyvesant	40		
Tarrytown	50		
Troy	55		
West Point	50		
West Troy	55		
Yonkers	55		

From Elizabethport.

Albany	$1 00@	New London	1 25@
Boston	1 75 1 80	Newport	1 40
Bridgeport	1 00	New York	75 60
Fall River	1 40	Norwalk	1 00
Hartford	1 50	Norwich	1 30
Hudson	1 00	Pawtucket and towing	1 50
Lynn		Portland	1 95
Middletown	1 25	Portsmouth	2 15
New Bedford	1 45	Providence	1 40
Newburyport	2 05	Salem	1 80
New Haven	1 00	Taunton	1 40

From Port Richmond, Philadelphia.

Astoria	1 30	New York	1 30
Boston	2 00	New London	1 75
" bridges	03	Newport	1 75
Bangor	2 25	New Bedford	1 75
Chelsea	2 25	Newark, N. J.	1 40
Charlestown	2 00	Portsmouth	2 15 2 25
East Cambridge	2 00	Portland	2 25
" bridges	03	Providence	1 75
Fall River	2 00	Pawtucket	1 90
Gloucester	2 15	Quincy Point	2 00
Hudson	1 40	Roxbury	2 25
Hartford	2 25 2 35	Salisbury	2 40
Hingham	2 00	Salem	2 00
Lynn and dis	2 00	Troy	1 40
Malden and tow	2 25	Thomaston, Me.	2 50
Medford	2 63	Williamsburg	1 30

From Washington, N. J.

Hackettstown	$ 58	Drakesville	$ 1 68
Waterloo	81	Dickerson's Basin	1 11
Stanhope	90	Iron Dale	1 19
Port Morris	99	Dover	1 24
Rockaway	1 32	Paterson	1 75
Denville	1 33	Pompton	1 75
Boonton	1 44	Bloomfield	1 85
Little Falls	1 70	Newark	1 90

From Baltimore.

To Philadelphia	$1 40@	Boston	2 25@ 2 50
New York	2 10	Sound Ports	2 25@ 2 50
Washington	1 10	Norfolk	1 00@
Annapolis	75	Richmond	1 30@

From Georgetown or Alexandria.

To Philadelphia	$1 50	Boston	2 75 2 50
New York	2 15	Sound Ports	2 25 2 50

Provincial Freights.

	Currency
Sydney to N. Y	$3 40
Sydney to Boston	3 00
Lingan	3 50
Lingan to Boston	3 00
Cow Bay	3 25
Cow Bay to Boston	2 87
Cow Bay to Portland	2 50
Big Glace Bay	4 12½
Little "	3 00

Foreign Freights.

New Castle and Ports on Tyne	£17s6 keel.
Liverpool	13s 6d@ 15s

Weekly Coal Trade Circular.

NEW YORK, August 23, 1867.

The Coal Trade still continues very dull. The Pittston sale of Wednesday last, as compared with the last Scranton sale, and taking the difference of freight between Newburg and Elizabethport into consideration, shows no improvement in price. There was present at this sale a very slim attendance of buyers. The coal was put up in lots, and sold without reserve to bona fide buyers. The auction system of selling coal on a dull and declining market is on trial this year. It undoubtedly worked advantageously, on a rising market, to the interests of the companies so selling. It is questioned by many, as the result of this year's developments, whether it is equally as desirable a mode of sale when the Trade is in its normal condition. There can be no doubt about the advantage it gives in the market to the companies who sell their Coal at auction over those regions, who, having a fixed rate of tolls promulgated at the opening of the season, are compelled to compete with those companies who see rate of tolls is based upon the price realized for their coal at tide water from month to month. The heavy decline in tonnage from the Schuylkill region this year—already about 700,000 tons—where the tolls are on "a fixed basis," and the large increase of tonnage from the Lackawanna region, the tonnage from which is mainly disposed of at auction, indicates unmistakably the great advantage the latter region now possesses over the former. The power to equalize rates rests solely with the Reading Railroad, which unquestionably has the ability to place Schuylkill Coal in the market on as favorable terms as Coal can be transported from any other region. The Lackawanna Companies, selling their Coal from month to month at auction, now command the market, as, after coal has declined below the cost of production, the Schuylkill operators, working on a fixed rate of tolls, can no longer compete. The remedy for this condition of affairs is for the Reading to either adopt a sliding scale of tolls, based upon the monthly auction prices, or *persuade* the Lackawanna Companies all to adopt the old method of selling their Coal at private sale, when the toll rates of the Reading, at the opening of each season, can be made to conform to the minimum spring prices of Lackawanna Coals. Unless a reform is promptly inaugurated "Schuylkill Coal" will always remain in its disadvantageous position in the market, viz.: supplying only that quantity of Coal which the market may take above the extreme production of other regions. Vigorous preparations are this year being made by the Northern Companies to increase their production of Coal another season. A consolidation of mining interests is being effected at Wilkesbarre, the result of which will be to throw a largely increased tonnage *via* Delaware and Hudson Canal another season; hence the absolute necessity of prompt action on the part of the various transporting companies in the "Southern Coal fields" to be "up and doing" without further delay. P.

BOSTON STOCK MARKET.

(By Telegraph.)

BOSTON, August 23, 1867.

Prices bid to day were as follows:

Allouez	8	Huron	—
Calumet	21½	Isle Royal	1
Hecla	—	Minnesota	6½
Canada	—	Quincy	92¾
Copper Falls	26½	Cary Improvement	7½
Franklin	18	Rockland	—
Hancock	—	Boston Water Power	22¼

Sales at Boston Stock Exchange, August 22.

200 shares Allouez	8½	SECOND CALL.	
100 do do	b 30 8¾	100 shares Water Power	21⅛
100 do Water Power	21¼	172 do Calumet	22
100 do Cary Improvement	7½	100 do Franklin	b. 30 18½
535 do Copper Falls	26½	100 do Minnesota	s 60 6½
100 do do	26⅝	100 do do	b.60 6⅝
100 do do	26¾	100 do do	b.60 6¾
100 do do	b. 30 27¼	100 do do	s.30 6¾
500 do do	b. 30 27	25 do Copper Falls	26¾
100 do Franklin	18¼		

FOREIGN MARKET REVIEW.

Metal Report.

LONDON, E. C., August 3, 1867.

The metal market has been very inanimate during the past week, and the tendency generally is in buyer's favor.

IRON.—The demand for Welsh Bars is slack, but prices remain £5 15s. to £6 5s. Rails very dull. The accounts from Staffordshire are unsatisfactory. Scotch pig iron has improved 1s 6d., cash.

COPPER has been very sick. Two last Chili mail advised charters for about 1,900 tons pure copper, of which two-thirds is bars, which is a large quantity. Business done in English Tough; £75; select, £77; and manufactured under £80. In foreign, few transactions reported. Burra, £85; Wallaroo, £82 10s.; Chili is held for £68 10s.

TIN.—A fair business has been done, but prices are in buyer's favor. The last transactions were at £87 cash. There is more inclination to sell for arrival, but buyers are shy. Price, £88, Banca, nominally, £92, in Holland, £53. English to rather easier.

TIN PLATES.—Demand good and prices firm.

LEAD is dull, quotations remain £19 15s. for good soft English.

SPELTER market is flat, and buyers scarce. We quote spot £20 17s. 6d., special outports, £20 17s. 6d.

London Copper Trade Circular.

Messrs. Vivian, Younger & Bond (Aug. 3.) write:—Transactions in all kinds have been extremely limited, and although importers of Chilian copper produce are somewhat higher in their views, this does not seem to be warranted by the course of events. The result, indeed, has been an almost total absence of business. There are, in point of fact, no sales of the least importance in Chili produce to record. As to English tough cake, it has been sold at £74, the lowest price ever known in the copper trade, except in the year 1782. Sheet copper for India has been parted with at £77, which is, we believe, without exception, a lower price than has ever been known before. Notwithstanding, however, these apparently tempting figures, there appears to be at present no indication whatever of a recovery. It is very disheartening to such considerable shipments reported from the West Coast by each mail, at rates which must leave the importers serious losers; in fact, the sanguine feelings which still prevailed in Chili as to the future of copper is one of the worst features of the market, as tending to keep production up to its full average. With very limited consumption, and no aid from speculation, it seems clear that nothing but really short exports from the West can restore the market to a healthy tone.

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NEW YORK, SATURDAY, AUGUST 24.

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MINING ENGINEERS.

A few years ago, it was customary to begin mining operations, without due regard to the prospects of success, wherever fancy, or ignorant and even superstitious judgment, or speculative scheming, might find convenient footing. Even at the present day, there is much of this nonsense left. We hear of the divining-rod in the oil regions, of gold-mining in Ohio "where the general appearance of the country strongly resembles California," of coal-mining in the Utica slates, and of a score of similar undertakings; and not long since, we read in the prospectus of a very confidently proposed enterprise of the kind, that one way to find a mine, "though sometimes an expensive one," is to sink a shaft from the surface of the earth! There is a refreshing *naiveté* about the last statement; but many people act upon it, who would not be so foolish as to utter it.

But the fashion has changed, and now it is almost universally considered the proper thing to have a "scientific report" concerning the proposed operation. Many mining companies having obtained such reports at the beginning, and afterwards finding themselves bitterly disappointed in the results of their labors, join in the general cry of "humbug," and blame the expert whose opinion has so misled them. Let us enquire where the blame lies.

In the first place, the general ignorance of the community leads to a superstitious regard for all who claim to be scientific men. One would think that all the secrets of Nature were unlocked with a single key, and that, in some mysterious way, any young person who had undergone his brief novitiate, and had been ordained to the sacred profession of Picklock, would have no difficulty, afterwards, in penetrating to the most secret recesses of things. Not so do men judge in matters which they understand. How many men, brought up in business, make far-seeing and sagacious merchants? How many mechanics are fit to be master-mechanics? Yet in the business of mining, which involves a wider range of knowledge and skill than any other single profession, men are trusted every day on their own pretensions, or at best on the scanty proof afforded by their credentials of study. A company boasts of its judicious selection of a chemist to examine its mine, or conduct its operations; which is very much like securing, with much self-congratulation, a distinguished preacher to give legal advice, and afterwards conduct a difficult case in court. In the second place, the same ignorant reverence for "scientists" is the cause of an unreasonable demand upon them. By virtue of their unlimited knowledge or by means of the talisman of intuition they are supposed to bear, they are expected to see what is not to be seen, and to draw most important conclusions from most insignificant premises. As a natural result, the charlatans who pander to this popular superstition, indulge in the wildest prognostications of "future developments," riches "in depth," "inexhaustible deposits," and what not; while those professional men who are too honest to follow this example, but not honest enough (we say it kindly) to acknowledge the very narrow limitations of their powers, reconcile conscience with pride, say as little as they can with many words, and pocket their fees, washing their hands of the consequences. Another class, comprising many able and eminent men, is characterized by over-caution. These men, being employed to examine mines or mineral lands never venture on an opinion not already established by experience beyond possible doubt. They are the men who never make mistakes. If a mine is already paying monthly dividends, has ore on hand for a year in advance, and is provided with new and excellent machinery, they report the indications favorable! Would these scientific conservatives were more common; for, though they are of little use, they certainly do little harm.

No wonder that an old farmer, whose mineral lands we were once sent to examine, felt called upon to address us in the following, more pointed than courteous manner: "Now look here; be you one o' the old ones, or one o' the new ones?" Our request for explanation was promptly answered thus: "You see them old ones used to come, and look at the place, and say 'well, whar's yer mine;' and says I, 'that's what I want *you* to tell;' and says they, 'Oh, if you haint got no mine, we can't see nothin'. But these ere new ones, they kin see jest what's below. I wouldn't give a cuss for a geology chap that had to make a hole in the ground, afore he knowed what was in it; I kin do that myself!"

What with the "old ones" and the "new ones," the public, we fear, gets but indifferently served. Whose fault is it? Most certainly the public's.

The business of mining is attended with certain extraordinary risks. There are elements in it which defy exact calculation. Yet, considering the extraordinary profits it involves, it may be said *on the average* to be as remunerative as agriculture or commerce. The more knowledge and skill are brought to bear upon it, the greater is the reduction of risks effected. Every company or individual proposing to purchase or develop a mineral property, should use all the means in its power to learn what are the prospects of success. In our country, the matter is, in one respect, greatly simplified. Our undeveloped resources are so great in proportion to our developed, that no one desires to touch a doubtful enterprise. It is hardly worth while to begin, if all indications are not favorable. Here, then, is the first point where the skilled mining engineer can be of service. He can often condemn an enterprise from the outset, and save his clients the unnecessary expenditure of money. The geologists of the N. Y. State Survey tardily, but pretty effectually, put a stop to the mining for coal in the Hudson Valley; and few will be found sufficiently foolish to resume that search, in which so much money was wasted. Even in the present unsatisfactory condition of affairs, there are hundreds of cases when a firm and outspoken engineer has prevented the deception (intentional or unintentional) of his employers. Our experience leads us to infer that seventy-five per cent. of the scientific reports on mines and mineral lands are unfavorable. Of course, these never see the light, and the great service thus rendered is apt to be forgotten. People are often ungrateful for such information. It interferes with their plans. The contemptuous talk about scientific experts, comes partly from those who have been deceived by quacks, and partly from those who have been undeceived by true men.

The subject grows beneath our hand; and we must postpone a discussion of the points on which a consulting engineer ought to give, and can give, assistance of value.

THE HAYWARD MINE.

A correspondent of the *Alta California*, giving an account of a visit to the Hayward mine, in Amador county, of that State, styles it "the chief mine of Amador county, one of the richest mines in the State, and the deepest in the world." The main shaft of the Hayward is now 1,230 feet in depth, the bottom being 300 feet below the level of the sea; but it cannot claim the distinction thus conferred upon it. Many of the mines in Mexico are worked to a greater depth, while in the United States the Minnesota mine at Lake Superior is said to be at least 1,200 feet deep. But on the other side of the ocean depths have been attained, in comparison with which these figures are insignificant. The Eselschacht or "Donkey Shaft," in Bohemia, is believed to be the deepest in the world. It is an ancient piece of work, extending 3,778 feet below the surface, and at present not accessible to its full extent. Of shafts actually open, the deepest is probably the Samson shaft, in the Harz (Prussia, *née* Hanover), which considerably exceeds 3,000 feet. The coal mine at Lugau in Saxony, where occurred last month one of the most dreadful catastrophes of modern times (battles excepted) was nearly 2,000 feet deep. Many of the English coal mines exceed 2,000 feet.

The Hayward mine is remarkable (aside from its being probably the deepest in the United States) for the fact that no pumps are used in lifting the water—the whole work being done by hoisting in buckets, which are so large as to merit the name of tanks. It must not be inferred that this system would work equally well everywhere. The Hayward mine is not troubled with sudden or heavy influx of water, and so the hoisting system is adequate to the work, and has the advantage that it does not get out of order, nor require change, except a lengthening of the rope, as the shaft goes deeper.

The net profits of the mine are popularly estimated at $50,000 monthly, a sum which we believe is not far from the truth. This is due, not so much to the richness of the quartz, as to the uniformity of its yield, and the natural facilities for mining and milling. Yet all these would be worthless without the careful and economical administration by which they are utilized. It is an interesting fact that the Hayward quartz is, at the present depth, richer than formerly, having risen from $10 to more than $20 per ton in value. This seems to contradict the theory of some geologists that gold mines "give out" in depth, and to support the notion of others, that after passing a certain barren or impoverished zone, the miner will find the character of the ore, in a true fissure vein, again improving. It is sought to explain this phenomenon by certain theories of deposition by galvanic currents, which are too vague to be profitably discussed at present.

GOLD MINING IN PENNSYLVANIA.

The New York and Pennsylvania Gold and Silver Mining Company, of Pennsylvania, publishes a prospectus, in which the following items are set forth:—The property of the company consists of leases of 1,356 acres of "land containing mineral," in the Wyoming and Susquehanna counties. The "mineral" has been "thoroughly tested," with the following results:—14 oz. of red ore contain 0.25 grains of gold, representing $18 per ton; 15 ounces of ore contain 0.375 grains of gold, representing $320 per ton (also copper at the rate of $60); one oz. of ore contains 0.958 grains of gold and 1.916 grains of silver, representing a total value of $419.90 per ton. These results show the interesting fact that the more ore you take, the less gold you get; so that the company has only to work on a small scale to make a great deal of money. The scale must not be too small, however; for another assay only obtains from about half an ounce of ore 0.01 grains of gold, representing $12.80 per ton. The best quantity to be worked at once is one oz., which will yield about five cents, at which rate the product of only fifty thousand million ounces—the trifling expense of production being left out of the account—would pay the national debt.

There is also a red decomposed slate on these lands, of much value for paint, and worth in the city of New York twenty-five dollars per ton. "Consequently, it is believed that the product of this branch of the company's operations may also be made largely remunerative, if carried on on a scale commensurate in any degree with the wealth-giving quality of said mineral." Fifteen thousand tons per annum of this slate sold in New York at a profit of $17 per ton, gives a net income of $225,000 to the fortunate company. If that does not satisfy the stockholders, let the quantity be doubled. The supply is inexhaustible; and the demand for red paint is positively astounding. This shows us a new fact, viz.: that red slate is a good deal better than gold.

The public can have one-fifth of the stock at the low price of fifty thousand dollars. The rest of the stock is no doubt deservedly distributed among the acute intellects who have been able to perceive the "peculiarly promising" nature of this enterprise. The land-owner gets none of it; for he has leased his mineral; and his rent must come out of the production of the mines and quarries.

Joking apart, we must condemn such a plan—not because it is one whit worse than a thousand others; but because it, and all others like it, is evidently unfair to the *bona fide* investor. The tests described are totally inadequate to the conclusions drawn by the company. The red slate business might support a hard-working man with a small family; it won't support a president, secretary, superintendent, and board of trustees, besides paying interest on $500,000. The actual value of the gold-deposits is problematical; and the party who takes all the risk is offered one-fifth of the possible profit. What will the original holders of $400,000 of the stock lose, in case of failure? Nothing. The trustees and others, who have confidence in their prospects, should divide the risks evenly, and not show their confidence in so equivocal a manner, by asking somebody else for the paltry $50,000 which is to bear harvest a hundred-fold.

Tintinnabulation.

The Ironton *Enterprise*, Aug. 15, says:—"We have frequently been requested to 'puff the tin mines,' and we have refused to do so until we have farther proof that the metal does exist in paying quantities. Enough time has passed since the discovery was made to have had at least a satisfactory assay; but to our knowledge, nothing more than an attempt to assay has been made. If tin does exist in paying quanti-

ties, let the fact be demonstrated, and we shall take pleasure in 'puffing' it. Until a practical and satisfactory test is made, we shall decline saying that the tin does exist in paying quantities, and we advise all to keep cool on the tin question until it is known that there is enough of the metal to make a noise about."

That sounds like sober sense. In this connection we may add, that we have inspected samples of the "tin ore" sent here for assisting the sale of lands. They are rock, of a character not forbidding the presence of tin; but no ore could be seen by us with the naked eye. Assays made in this city have given contradictory results. Brass isn't tin, gentlemen!

EDITORIAL CORRESPONDENCE.

LAKE CHAMPLAIN, Midnight, August, 21–22, 1867.

No man can serve two masters, especially if they happen to be mistresses. An attempt to follow at once pleasure and science, to go to the Burlington meeting by way of the Hudson River and Lake Champlain, has brought us into our present situation. The People's Line is an admirable institution; but sticking in the mud just below Albany is not a very rapid method of travelling. In this way it was that we missed the Whitehall train, and found ourselves obliged to seek in the town of Delavan a substitute for the expected delights of a journey by daylight between the lovely shores of Champlain. Yet even in Albany there is something to be seen, and we are fain to note for the benefit of our readers some of our experiences there. Bearing in mind our exalted profession, we view the subject from a geological point of view. Our first observations, as we have hinted, concerned the alluvium in the bottom of the North River, with which we have no desire to become further acquainted. After breakfast at the Delavan, we sallied forth, in company with the eminent—and the charming—(no you don't; this journal is not given to the vulgar arts of flattery!) and took our way to the State collections of Agriculture and Natural History. The former is rather a meagre affair. Wax pears and apples, plaster cows and dogs, lithographed squashes and turnips, superannuated ploughs, and a somewhat shabby flag of the free city of Hamburg, are the prominent objects of interest. As the eminent Aforesaid observed, the agricultural implements seemed to be one-horse affairs, scarcely adequate to the demands of the teeming earth. Tearing ourselves away without excessive pain, we entered the rooms devoted to Natural History. The geological and mineralogical collections are very interesting, and so well arranged as to be easily and rapidly studied. The most striking objects are the admirable casts by WARD, of Rochester, representing with perfect accuracy some of the largest and rarest fossil remains hitherto discovered, the originals of which, being scattered in the collections of both hemispheres, would never be available, in any other way, to the ordinary student. The great Megatherium, the Mammoth of the Ganges, and many others, are by this means brought to our very hands and eyes. Prof. WARD deserves the highest credit for his enterprise and skill in the preparation of these casts; and we are glad to know that his labors are not unappreciated. It is said that he has a large establishment in Rochester, kept busy in the manufacture. The Albany collection presents, as might be expected from the intelligence and energy of Prof. HALL, a tolerably complete picture of the palæontology of our State. No one who understands the importance of the evidence furnished by the New York surveys concerning the formations below the carboniferous strata, can fail to be duly grateful for so good an illustration, by actual specimens, of the reports of our geologists. The conchological collections are very complete, and admirably arranged. The zoological specimens look stiff and stuffy, as usual. One learns little from the mere inspection of rows of furred or feathered mummies. It is like studying the human race from a lot of saw-dust dolls, or a congregation asleep in a church. The taxidermist generally spoils everything except owls. A stuffed owl is more lifelike than nature itself. We saw a synod of them that haunts us yet.

Leaving this building, we proceeded to the Capitol, to look at the Constitutional Convention—a collection of fossils recently gathered by the Legislature at considerable expense, and likely to be on exhibition for a long while to come. As we entered, the Pterodactylus had the floor, and was soaring into ante-diluvian eloquence on the subject of a canal to afford an outlet for the cretaceous basins of the West. The charming Aforesaid wanted to know why they didn't empty their basins into the Mississippi, and done with it. To which we replied by informing her that that is just what they are doing, and will continue to do, in spite of pterodactylic poetry. The winged dragon must be excused for not knowing that; as, in his time, the Mississippi was not much to speak of. He was followed by a Palæotrochis major, who called for the previous question. The Megalosaurus in the chair said he didn't exactly know what it was, as it hadn't been reduced to writing, but it was finally discovered to be a little suggestion for the protection of small organizations, offered by a Protozoon from near Potsdam. He wanted to protect these small organizations against consolidation, from which much mischief ensues. Deposits in banks were said to be often entirely lost by this process. At this an Ammonite uncurled himself out of an arm-chair, and called for his eyes and nose. A number of active little Rhizopods were running about on errands; but no one attended to him; and in a moment he withdrew his call and rolled himself up again, as blind as ever. Presently there was a vote, and everybody, from the Mastodon to the Sigillaria, stood up to be counted. The bivalves made a good deal of noise, and some of the Tertiary fossils got into groups, or ran about so that it was hard to count them. We noticed a venerable, but lively mollusk (Grelius unicus) who took great interest in the proceedings. The mollusks were once a very respectable family; they manufactured pearl in their day; but they are troubled, especially in warm seasons, with softening of the brain.

It is a peculiarity of fossils, that they require about a million years to produce any visible results; and, as we had not so much time to spare, we left the curious assemblage, and soon found ourselves on the way to Saratoga. Here we stowed away some of the celebrated mineral water for future analysis, and amused ourselves by contemplating the varieties of insect-life, particularly the Ephemera and Rotifers, (otherwise called hoop-bearers) in which the locality abounds. The next train brought us to Whitehall, where we took the steamer, in which we are at this present moment writing. R. W. R.

DIVIDENDS.

Locust Mountain Coal and Iron Company at Philadelphia, 4 per cent., payable August 26; Delaware & Hudson Canal Company, 8 per cent., now due; Pacific Mail Steamship Company, 37th dividend, 3 per cent., payable in this city September 2; Fort Pitt Oil Company at Pittsburgh, 2½ per cent. on demand.

Scientific Meetngs.

NATIONAL ACADEMY OF SCIENCES.

EIGHTH SESSION.—FOURTH DAY.

Prof. Henry, Vice President, presided. Prof. Gibbs communicated interesting "Spectroscopic Notices." Prof. James Hall, of Albany, delivered one of the most interesting lectures ever given before the Academy. He remarked upon the principles adopted in the establishment of the groups of strata in the Paleozoic series in America, and the necessity of considering the source of origin of the materials of which they are composed before insisting on the equal value of certain apparent characters. A formation of limestone, made up mainly of organic *exuviæ*, and accumulated in a comparatively quiescent sea, will have a more uniform and wide-spread fauna than sedimentary formation made up of sand, clay and lime, or a mixture of all these. As an example, showing that we are not to consider identity of fossils or similarity of composition essential to the character of a group, he instanced the coal measures, which in the northeastern extension have a thickness of from fourteen thousand to eighteen thousand feet, mainly of sandstone and shales, with little of calcareous matter. This formation, stretching south-westward and westward, gradually thins to a few hundred feet, losing its sedimentary character and becoming mainly a calcareous formation with interstratified seams of mud, with no fossils identical and few similar to those prevailing in the eastern portions of the group. Passing hastily over the suggestive groups, he instanced the Hamilton, Portage and Chemung groups, of New York, as lying between two well-established horizons, above and below, while in the western extension of the same belt, no less than four or five distinct terms had been applied to indicate a part of the whole mass. Referring to what he had published on this subject more than fifteen years since, he showed that along three hundred miles of outcrop of these formations, the physical characters had become extremely or entirely changed, and the fossil remains so different in the two extremes, that if the physical continuity could not be traced, they would be referred to distinct epochs. He showed by the gradual change in the fauna, owing to physical conditions which he explained, that a set of strata at one point referred to the Devonian age, might at a distant point be with equal propriety referred to the carboniferous age. Prof. Hall's remarks elicited comments from Prof. Agassiz, who said that there was a zoological side to physical geography which Prof. Hall seemed to have overlooked. The difficulties which he (Hall) had experienced in his search after fossils, were the same as those experienced by all geologists. Investigations were now progressing, however, which promised to remove most, if not all, of these obstructions to the complete development of science. The study of geology had been almost entirely confined to the temperate zones, but it was beginning to extend its researches to other parts of the globe. Examination showed the geographical distribution of former times was identical with those of to-day, as was also the distribution of animals. The laws of the distribution of plants and animals were the same to-day as in former periods of the world's history. In connection with this subject, Prof. Agassiz suggested that the study of the coasts of this continent—particularly of the Atlantic coast—would afford a great amount of information. It would be interesting to know the materials of which they were composed. At the same time it would be well to examine carefully the sea bottom along the coast. Such an examination would prove of great value to the country as well as to science, and he would advise the United States Coast Survey, of which Prof. Pierce was the Superintendent, to take charge of the work, and do it thoroughly. Prof. Pierce made remarks concerning the province of the U. S. Coast Survey, and the assistance which he should expect in its administration from academicians and men of science generally. Referring to the harbors of New York and Boston, he said they were being destroyed. Prof. Agassiz added a statement of the changes in progress on the Coast of South America, through the encroachment of the ocean. Prof. Henry referred to currents of temperature in the atmosphere and the ocean, as the occasion of much of the bithological and palæontological difference between contemporaneous rocks, as well as the unequal distribution of loose materials along the coasts of the continents. Papers by Prof. Agassiz on "The circulation of Blood in the Selachians," "Parasitic Crustacea on the Gills of Sharks," and "Embryology and Affinities of Cyclopteries," completed the extremely important and interesting series of contributions which that gentleman has made to the proceedings of the present session.

The circulation of blood in skates, he said, affected the circulation of blood in animals generally. In selachians but one-fifth of the blood actually circulated. The other four-fifths he designated as stagnant, or dormant blood. That which circulated passed through the gills and thence into the vertebral channels. The movement of the heart in selachians was undulatory. After leaving the heart the blood did not immediately return to that organ, but was received by four sacks or bags (where the stagnant blood was deposited), before passing again into the heart. One celebrated naturalist had erroneously described these sacks for lymphatic vessels. Prof. Agassiz was satisfied that they were blood chambers. In regard to "parasitic crustacea in the gills of sharks," Prof. Agassiz stated that the number of parasites found in the respiratory organs of sharks was very large. He spoke of a shark which had been caught off the coast of Massachusetts, the gills of which were entirely eaten up by parasites. The arteries were almost destroyed and their openings gaping. Many of the blood vessels were also eaten up. The cavity of the heart had been encroached, and the pericardium was perforated. There was a hole in the heart large enough to admit a man's thumb. What was considered remarkable was that this almost bloodless shark, when caught, offered great resistance and fought with almost as great fierceness as any shark of its dimensions possibly could. Of Cyclopteries Prof. Agassiz said, these families had always been a stumbling-block to geologists. The subject perplexed Cuvier. The old system of classification could not be maintained, and the speaker was candid enough to take exception to his own former classification. It was now well known that the embryonic of the skate was a miniature image of the shark, and that the shark was a full grown skate. This new acquisition of knowledge showed that naturalists were beginning to recognize a positive system in nature, and to acknowledge that embryonic researches afforded a standard by which to judge of the relative positions of the various types of animals. Prof. Gibbs' paper on "The Determination of Wave Lengths by the Method of Comparison," some remarks by Gen. Barnard, supplementary to his lecture of the day before on "The Precision of the Equinoxes," and a mathematical communication by Prof. Theodore Strong, of New Jersey, on "A Process of Integration Used in the Case of a Planet's Orbit Disturbed by Small Forces," completed the programme of the session. Prof. Henry made a few closing remarks in regard to the true mission of science and its relation to civilization, and the Academy adjourned, to meet in Washington next January. The proceedings of the Hartford meeting were perhaps somewhat unequally devoted to the departments of geology and mathematics, to the partial exclusion of some, and the total exclusion of other, sciences equally within the province of the Academy; but the importance of the papers presented is beyond question. Profs. Agassiz, Hall, Rood, Gould and Gibbs, in particular, deserve the thanks of the scientific public for their contributions. It was expected that the Academy would, before adjournment, elect a President, in place of the late Prof. Bache, and three members to complete the total of fifty, to which the Academy is limited; but it seems that the academicians are not ready to undertake this work. It is said that Prof. Pierce is to be the successor of President Bache.

Correspondence.

[To insure insertion of Correspondence in our columns the full name and address of the writer must be given.]

The Divining Rod—The Practical Experience of a Medium in Quartz Mining.

EDITORS JOURNAL OF MINING:

GENTLEMEN—Your remarks (in a late issue of the JOURNAL OF MINING) concerning a work on the subject of the "witch-hazel," has led me to address you on the subject. While operating in mining in Colorado a few years since, I was led into the mysteries of the "witch-hazel." Previous to that, I was as great a skeptic as any one in regard to it, but my senses of sight and feeling (as fate has ordained me one of the mediums) were too severely worked upon to remain any longer a doubter on the subject. At that time I tested its operations in every way, and was fully satisfied that it was a reality. For the past five months I have been operating in mining at Madoc, C. W., and have continued my experiments with the forked stick (not with the "hazel" alone, as I find *most* all young wood will produce the same effect.) In April last I selected a spot where the stick indicated a vein running north-east and south-west, and set my men to work, (where there was no surface indications of a "crevice.") After excavating a few feet, the crevice became very clearly defined, showing two regular walls, about four feet apart, with the vein running perpendicular. By continued experiments when the shaft had reached the depth of nine feet, I found (by the use of the stick) that there was a "lode" running north-west and south east, crossing the vein we were working, about two feet from the north-east end of our shaft. I immediately directed the men to open the shaft six feet longer in that direction, so as to develop the two veins with the one shaft. This experiment proved the stick had not deceived me, as the "hanging wall" of a north-west and south-east vein, dipping to the north-east, was exposed, showing, as I expected, another well defined "lode." I experimented with this mystery continually, and I am satisfied that it has never yet deceived me, and I venture to say that I can trace any quartz vein as fast as I can walk, taking a Virginia fence course, on the surface. Its operations are singular and worthy of a thorough examination. By walking directly over and in line with the vein, the stick is not affected, but the least deviation to either side, causes it to bend towards the person carrying it; or crossing a vein causes it to turn. Another peculiar feature is, that a coin placed in a slit, cut in the point of the fork, appears to break the connection, and its operation ceases. *These are facts*, and as I intend to return to the Madoc mines in the early part of September, I shall be perfectly willing to prove them to any one who will undertake to fathom the mystery. My theory is that it is caused by a current of electricity, passing up from the bowels of the earth, through these crevices, and diffusing itself through the atmosphere. As many use the "hazel" to discover water, oil, etc., it may be that electricity is carried by them; or, again, water and oil would more likely be found in or over a crevice, than in or on the solid rock. The operations of the stick, if properly understood, will save a large amount of time and money, expended in various places; in stripping the rocks of the surface soil, to discover a crevice; and in many instances of shafts being sunk, in blind groping for a crevice in the rocks, where the forked stick would have pointed it out in a few moments, without trouble or expense. It is time this puritanical stigma of witchery, was trampled under foot, and science assume the mastery. I would urge upon you the importance of this matter, and would be pleased to render any assistance in my power towards its development. I do not claim any scientific attainments. My information has been gathered from practical experience in quartz mining. GEO. W. JONES.

Correction.

45 WILLIAM STREET, N. Y. August 20, 1867.

EDITORS JOURNAL OF MINING:

Gentlemen—Will you please correct an error of omission that occurred in "setting up" my letter of the 13th inst., on the chemical phenomena which obtain in the combustion of the petroleum fuel, and which appeared in your issue of the 17th inst.? Quoting from my letter as written, I stated: "As the oil flows out of the pipe it falls upon the red hot bottom of the retort and is vaporized. This vapor, which, it will be remembered, is a *chemical combination of carbon and hydrogen is now permeated by the superheated steam*—a chemical combination of oxygen and hydrogen—at a temperature which renders it easily decomposed if brought in contact with chemical substances for which either of its constituents have much affinity," &c., &c. The omission of the words above italicized made sad havoc with my chemistry. ALBAN C. STIMERS.

Patent Claims.

Interesting to Miners, Millmen, Metallurgists, Oil-Men, and Others.

The following claims have recently been issued from the United States Patent Office:

67,646.—REVERBERATORY AND CUPOLA FURNACE.—J. Durell Green, Cambridge, Mass., and John A. Kay, Columbia, S. C.

Claim. 1st. The combination of an ordinary cupola for melting iron or other metal, with a reverberatory furnace, substantially as and for the purpose described.

2d. The application of waste heat from the cupola to heat the metal prior to its introduction into the cupola, substantially as described.

3d. In combination with the cupola and a reverberatory furnace, a supplemental heating or reverberatory chamber, substantially as described.

67,651.—TUYERE FOR BLAST FURNACES.—Benjamin H. Bibler, McKeesport, Pa., assignor to Pittsburg and McKeesport Car Co.

Claim. 1st. A tuyere, consisting of a pipe or the projection of the blast pipe of a smelting furnace, when such tuyere extends into the cupola beyond the inner face of its wall or lining, and to or toward the centre of the cupola, substantially in the manner and for the purpose above set forth.

2. A tuyere having an elbowed head with a cap, d, projecting outward so as to cover the apertures e e, constructed and operating substantially as and for the purposes described.

3d. One or more apertures, e, in the lower side or face of the tuyere or tuyere pipe of the cupola of a smelting furnace, so as to discharge a portion of the air of the blast against the molten metal in the bottom of the cupola, substantially in the manner and for the purposes above set forth.

67,702.—PROCESS OF CONVERTING CAST IRON INTO BAR IRON AND STEEL.—John Heaton, Langley Mill, England.

Claim. 1st. The use of nitrate of soda or nitrate of potash, or chlorate of soda or chlorate of potash, to act from the under side upward upon cast or pig iron, when such iron is in a molten state, for the purpose of converting the same into steel or into wrought iron, substantially as described for the purpose specified.

2d. The removable chamber containing nitrate of soda or potash, or chlorate of soda or potash, inserted in recesses of a revolving cylinder containing molten cast or pig iron, for the purpose of forming steel or wrought or soft iron, substantially as described for the purpose specified.

3d. The revolving cylinder, a, with a solid or hollow axis, a', and with or without the semi-circular end-plates made in one piece or two parts, 1 and 2, and adapted to receive the removable perforated chambers, d, substantially as described for the purpose specified.

4th. The converter, A, constructed as described, having a lower chamber, A2, containing nitrate of soda and nitrate of potash, or chlorate of soda and chlorate of potash, covered by a perforated plate, upon which molten cast or pig iron is placed, substantially as described for the purpose specified.

67,736.—PROCESS FOR TREATING PETROLEUM.—John C. Pedrick, Washington, D. C.

Claim treating petroleum or other hydro-carbons by passing through the oil or hydro-carbon a current or currents of steam and air, substantially as and for the purposes herein set forth.

On-dit about Minerals, &c.

☞ Boring is now going on to ascertain the nature of the substratum of the bed of the East River, so as to guide the engineers in preparing the foundations of the new bridge from New York to Brooklyn. The substratum is compact gravel interspersed with boulders. If this foundation extends deep enough, it will insure a solid foundation for the buttresses of the bridge. The borings will be continued to a depth of forty feet, when, if at that depth they do not reach loose sand or clay, which would render the foundation unstable, the engineer is satisfied that a secure foundation, without any special sinking, can be assured. Thus far in the surveys for the bridge no extraordinary difficulties have been presented.—*N. Y. American Artisan.*

☞ An English paper says that Mr. Samuel Higgs, Jun., of Leeds, has invented a safety lamp, which seems to overcome all the objections to the present lamps, and to meet the requirements of the modern system of ventilation. The principle is to enclose the ordinary Davy lamp in a case or tube made partly of gauze and partly of glass; by these means there is no possible chance of an explosion, however strong the current of air; nor can the lamp be tampered with, as the inner lamp is locked with one description of fastener and the casing with another. The pricker, or trimmer, is done away with; a flat prepared wick being substituted for the ordinary coarse wick, and the lower part of the casing being of glass, a better light is obtained.

☞ Most of the silver from Chili, which formerly was shipped in the ore, is now exported in the shape of bar silver. This change has been brought about by an improved system of amalgamation. Formerly none of the ore which contained either arsenic or antimony could be made available on the spot, but had to be conveyed to Europe, in order that the silver might be extracted. Within the last twelve months the system employed in Europe has been introduced in a modified form, and with such successful results that hardly any silver remains in the ore after the operation has been gone through.

☞ A fine display of meteors was witnessed at Dubuque on the morning of the 11th inst. They darted from all parts of the heavens to the number of one hundred or more. The local paper says: "Three times they appeared in numbers, as if invisible beings were in different places throwing meteors at each other. Then the sky would shine with a white light for an instant, and an interval of some minutes' duration would elapse before another star would shoot." The beauty of the spectacle passes our powers of description."

☞ We notice in a California exchange that a new roasting furnace has been invented by Messrs. Knapp & Peacock, of Meadow Lake, which is thought to be a decided improvement up on any now in use. Twelve hundred pounds of sulphuret rock from Union ledge No. 2, burnt in a small prospect furnace, constructed after the Knapp & Peacock model, was completely decomposed. It takes about two and a half hours to destroy the sulphurets.

☞ The progress at the Hoosac Tunnel for the month of July is much greater than for any previous month. The east end heading was driven 341 feet, 18 feet wide by 8 feet high. At the west shaft 173 feet was made, including both headings. At the west end 51 feet going east was made in heading. Mr. B. N. Farren made 29 feet of completed tunnel, and 12 feet about one half completed. The central shaft was sunk 19½ feet.

☞ An exchange says: Natural soap, or soap clay, has been discovered on Marpole's mine, on the Barbois, in Franklin county, Mo., some sixty miles from St. Louis. This soap or clay, was found at a depth of seventy-five feet below the surface, which gives evidence of the presence of saponiferous qualities, and is equal in its effects to many of the soaps of the manufacturers.

☞ A remarkable sulphur spring has been brought into notice lately in Henry county, Tennessee, within ten hours' journey of Memphis. The stream of the well flows with great violence, and the water is so strong that one can smell it before getting within a quarter of a mile of the spring.—*N. Y. Tribune.*

☞ The Prussian budget of 1867, for mines, furnaces and salines, estimates an income from all these sources of 17,863,151 thalers (about $12,000,000), and an expenditure of $13,769,614 thalers (about $9,000,000).

☞ A heavy flood has occurred at the Crocodile creek gold diggings, Queensland, and caused damages to the amount of £2,000. A rush has taken place to the district of Rosewood, where some good-sized nuggets have been found.

☞ A dispatch from Cariboo says that Governor Seymour has settled the mining dispute by seizing the ground in controversy and arresting the ringleaders in the riot.

☞ The probable shipments from Chili and Bolivia for the first six months of this year are 28,251 tons fine copper, against 29,955 tons in 1866, showing a decrease of 1,704 tons.

All Sorts.

☞ Fifty distinguished Frenchmen have sanctioned an enterprise for the discovery of the North Pole. M. Gustave Laubert, formerly a pupil at the Polytechnic, now in the hydrographic department, proposes to reach the open Polar Sea and the Pole itself, by a route never before tried. The project has been well received, and a subscription has been opened. As soon as 600,000f. are obtained the enterprise will be carried out. Amongst the fifty names appended to the announcement, are those of Elie de Beaumont, Chasseloup Laubat, Michel Chevalier, Brown de Lhuys, Guizot, Emile de Girardin, De Quatrefages, Leonce de Lavergne, Leon Say, Alfred Maury, and Milne Edwards. The president of the executive committee is M. Chasseloup-Laubat. The Emperor has given his full approval to this spirited project.

☞ A very curious incident occurred in the surveys of the Iron Mountain road, in the cypress swamps of South-East Missouri. The engineers, having orders to locate their surveys in connection with the United States land surveys, had occasion to search for the marks or records made years ago in the swamps. The land surveyors had marked their results of their work by cutting into the body of a tree, leveling off a smooth surface of the trunk, and engrossing their record on the tablets thus prepared. The engineers found the trees of the old survey, and recognized the scars of former cuttings, but to reach the records were compelled to cut into the trees again. New wood had grown up over the old record, completely hiding and protecting it. But, after cutting into the body down to the original tablet, they found the surveyor's record as plain and distinct as when first made.

☞ The New York *Hide and Leather Journal* notices a few of the differences in the shape of the pedal extremities of people in various sections of the country. Shoes made for one locality are not adapted for all. For instance, a broad shoe, made wide in the shank, is best adapted to the Eastern trade, a narrow sole meeting with but little favor. Rhode Island, though the smallest State in the Union, can boast of the biggest feet that ever trod sole leather. The Middle States require slimmer shoes and higher in the instep than the East. The instep grows higher as we progress southward, commencing with Virginia, and the feet shorter and more plump. Rarely, at the North, does a full grown man wear less than a No. 6, running up in the scale of sizes to No. 11, but at the South, many a full sized man wears fours and fives, and seldom ever nines.

☞ Pleasure vs. Business: A select few of the New York Coal trade desiring to shake off the fetters of business for a day, on Tuesday last, took advantage of the "clear day of the week" or the month perhaps—and Capt. David Cox's kind invitation, and with the steamer "Tontine" proceeded to the lower bay to enjoy a delightful sail, a well furnished table and the taking of not a few of the inhabitants of the "briny deep." Of course, the necessary improvisos of good nature were along and all went "merry as a marriage bell." Capt. Cox deserves to be remembered for the generous manner in which the whole affair was conducted.

☞ In the rock excavations made by the Lehigh Coal and Navigation Company, near the Glendon Iron Company's Works, for the new railroad, the contractors have made some of the heaviest blasts ever known about that part of the country. Fourteen kegs of powder have been used in one blast. A drill is made in the rock to a certain depth, when powder is poured in, filling up all the crevices. The amount of rock thrown out varies. On one occasion, one piece weighing about six tons was thrown into the river, a distance of five hundred feet.

☞ While workmen were engaged in re-opening and repairing the coal mines of Row Bavon, at Jeanette, they came upon a gallery communicating with the lower ladders, where they discovered seven bodies of the unfortunate workmen who, three months before, were imprisoned while making their way to the surface. The bodies were completely mummified—the shrivelled flesh adhering to the bones. This phenomenon is attributed to the abundant exhalations of carbonic acid gas collected in the gallery.—*Mechanics' Magazine.*

☞ The Emperor of Russia has taken an enlightened step. A system of instruction is to be organized over the length and breadth of the land. School houses are to be provided, and teachers appointed at the expense of the government. The secular education will be taken entirely out of the hands of the priests.

☞ "How is your son to-day?" asked a friend of a stockbroker. "Very ill," replied the old gentleman, struggling to maintain composure—tears coursing down his agitated features; "very ill, I would not give ten per cent. for his chance of life."

☞ "Isn't there a strong smell of pigs?" said one of the "University crew," one day, as they were rowing up the river toward Brighton. "Yes," replied a brother boatman, "that's because the wind's *sow* west."

☞ An ore that contains one per cent. of silver, yields at the rate of $206 97 per ton, mint value. One ton of silver is worth $29 697. The United States Mint pays $1 22½ per ounce, troy, for silver of 900 fineness.

☞ "I know a girl so modest, Sam, dat she ordered her beau out ob de house." "What for, Pompey?" "Bekase, in a conversation on de subject ob de wedder, he said de wind had *shifted*?"

☞ The rich gold discoveries which, it is alleged, have been made by the Mormons on Grande river, will increase the Gentile emigration to that region. It will be an evil day for Mormonism.

☞ Man is never wrong when he lives for others; the philosopher who contemplates from the rock is a less noble image than the sailor who struggles with the storm.

☞ The curvature of the earth amounts to seven inches per mile. A man six feet high cannot be seen from a distance of ten miles.

Distances rom San Francisco to New York—The Central Pacific Railroad Route.

The following complete table of distances and elevations of points on the Central Pacific Railroad of California, and other roads connecting therewith, between San Francisco and New York, is useful for reference.

Names of Places.	Distance from point to point.	Total distance.	Elevation in feet.	Names of Places.	Distance from point to point.	Total distance.	Elevation in feet.
San Francisco	—	—		Mile Twelve-mile Canon	5	546	4 825
Goat Island	1½	—		Mile Two-mile Canon	22	568	4,990
Oakland	4½	6		25 South Fork	9	577	5 062
San Leandro	8	14		45 North Fork	24	601	5,220
Hayward's	5	19		73 Bishop's Creek	19	620	5,418
Vallejo's Mills	8	27		121 Humboldt Wells	15	635	4,650
Kottinger's	10	37		382 Nevada State Line	65	700	4,830
Livermore Pass	12	49		734 Point on Salt Lake	75	775	4,290
San Joaquin river	20	68		22 Bear river	45	820	4,920
Stockton	10	79		22 Weber Canon	25	845	4,654
Woodbridge	13	92		8 Echo Canon	31	876	5,256
Consumnes River	14	106		106 Echo Pass	26	902	6,879
Sacramento	18	124		56 Bear river	18	920	6 045
Arcade	7	131		76 Reed's Summit	40	959	7 567
Antelope	8	139		18 Green River	75	1,025	6 092
Junction	3	142		189 Bitter Creek Sum't	20	1 045	7 175
Rocklin	4	146		269 Bitter Creek	13	1,058	6 315
Pine	3	149		426 Bridger's Pass	97	1,155	7 534
Newcastle	6	155		503 North Platte	23	1,178	6,795
Auburn	5	160		1,28 Rattlesnake Pass	54	1,232	7,560
Clipper Gap	7	167		1,758 Laramie river	33	1,267	7,175
Colfax	11	178		2,448 Evans' Pass	36	1,297	8,242
Gold Run	10	188		3,245 Foot Black Hills	31	1,328	7,946
Dutch Flat	3	191		3,42 Julesburg	149	1,477	3 513
Alta	2	193		3,62 North Platte Jun'n	78	1,555	2,790
Shady Run	4	197		4,12 Ready Island	22	1,577	2,649
Blue Canon	5	202		4,706 Willow Island	18	1,595	2,514
Emigrant Gap	6	208		5,300 Plum Creek	10	1,615	—
Cisco	8	216		5,911 Elm Creek	19	1,634	—
Crest	13	229		7,042 Fort Kearney	21	1,655	2 128
Truckee river	15	243		5,866 Wood river	19	1,674	—
Little Truckee	8½	251½		5,260 Grand Island	18	1,692	—
Eagle Gap	13½	265		5 000 Lone Tree	22	1,714	—
Hunter's	9	274		4,650 Silver Creek	22	1,736	—
Glendale	8	282		4,430 Columbus	18	1,754	1,458
Big Bend Truckee	29	311		4,220 Shell Creek	17	1,771	—
Humboldt Lake	41	352		4,047 North Strand	14	1,785	—
Oreana	30	382		4,100 Fremont	15	1,800	—
Mill City	35	417		4,250 Elkhorn	18	1,818	—
Big Bend Humboldt	37	454		4,372 Papillon	16	1,834	—
Iron Point	19	473		4,46 Omaha	12	1,845	968
Reese River	33	506		4,550 Chicago	264	2,340	525
Skull Ranch	10	516		4,59 Toledo	244	2,584	585
Shoshone Point	13	529		4,630 Cleveland	113	2,697	585
Beowawe Gate	8	537		4,735 Dunkirk	143	2,809	585
Gravelly Ford	4	541		4,780 New York	109	3,000	tide.

Coal Ash.

The ashes of coal are by no means as valuable as those of wood, and the chemical analysis shows that they are very deficient in the phosphates and alkalies so useful for manures. They contain an abundance of calcined clay, with oxides and sulphides of iron, magnesia, and lime. Notwithstanding this, they have been found very effective as fertilizers for certain clayish soils, making these soils lighter, more porous and easier to work; but the coal ash must be applied in sufficient quantities. Coal ash is better still in moist but not marshy grounds, principally when mixed with some slacked lime. The quantity of coal ash required is about fifteen to twenty cubic yards per acre; and experience has proved in Europe that coal ashes give much better results than a chemical analysis would indicate. They appear to have an absorbing power for nitrogen, and the sulphur and iron they contain are valuable as fertilizers.

Go'd Mining in Ancient Times.

According to Diodorus, the old historian, gold mining was not a very pleasant occupation. In his third book, he says: "On the confines of Egypt and the neighboring countries, there are parts full of gold mines, from whence, with the cost and pain of many laborers, much gold is dug—for the kings of Egypt condemn to their mines not only notorious criminals, captives taken in war, persons falsely accused and those with whom the king is offended, but also all their kindred and relations. There are, thus, infinite numbers thrust into these mines, all bound with fetters, kept at work night and day, and so strictly guarded that there is no possibility of their effecting their escape. Neither the weakness of old age nor the infirmities of females excuse any from work—to which all are driven by blows and cudgels, till at length, borne down by the intolerable weight of their misery, many fall dead in the midst of their insufferable labors. Nature teaches us (he concludes) that gold is obtained by labor and toil, is retained with difficulty, creates everywhere the greatest anxiety, and in its use produces both pleasure and grief."

Special Notices.

Paris Exposition—Sewing Machine Awards.

Our readers have seen published a brief telegram from Paris, announcing the award, over eighty-two competitors, to Messrs. Wheeler & Wilson of the Highest Premium, a Gold Medal, for the perfection of Sewing Machines and Button-Hole Machines. The following are copies of the official documents confirming the announcement:

EXPOSITION UNIVERSELLE, PARIS, 1867.
COMMISSION IMPERIALE. CHAMP-DE-MARS.
16th July, 1867.

MR. R. HUNTING, No. 139 REGENT ST., LONDON:—Dear Sir—Replying to your inquiry, I beg to state that the ONLY GOLD MEDAL for the manufacture and perfection of Sewing Machines and Button-Hole Machines, was awarded to Messrs. Wheeler & Wilson, of New York. Yours, respectfully,

HENRY F. Q. D'ALIGNY,
Member of International Jury and Reporter of same.

Another letter, of the same date, says:

DEAR SIR—Replying to your inquiry, I herewith give you the list of gold medals awarded to my class:

Dupuis et Dunnery, for Screw Shoe Machines.

Wheeler & Wilson, New York, for the manufacture and perfection of their Sewing Machines and Button-Hole Machines.

There is also, in the list of "Co-operators," a Gold Medal granted to Mr. Elias Howe, jr., personally, as Promoter of the Sewing Machine. Respectfully yours,

HENRY F. Q. D'ALIGNY.
Reporter of Class No. 57 (Group No. 6.) Member of the International Jury at the Exposition Universelle.

Extract from *Le Moniteur Universel*, official journal of the French Empire

"The Wheeler & Wilson Company of New York, manufacturers of American Sewing Machines, have just received the GOLD MEDAL at the Exposition Universelle, for the good construction of their machines; the new improvement for making button-holes, applicable to their sewing machines; also for their machine especially for making button-holes. This award is accorded for the great development that Messrs. Wheeler & Wilson have given to the sewing machine industry, in bringing their machines to the doors of all, by their cheapness and solid construction, which allows their employment with satisfaction in families, and with great advantage in workrooms."

Establishment for Refining, Assaying, &c.

John Waters' Sons are favorably known in this city as refiners and assayers of gold and silver, sweep smelters, &c., &c. Mr. Wm. C. and Chas. E. Waters have for years past availed themselves of their father's experience over the fires, and of his personal instruction, and claim a knowledge therefrom second to none in the business. We believe we are correct in stating that Mr. John Waters ranks among the oldest of the profession in the United States, and with an experience gained from boyhood in the various mines and smelting works of Cornwall and other mining districts of England. He has followed his calling in this country for some thirty odd years. All work is done under the immediate supervision of either of the above-named gentlemen. Lead and copper ores are treated with an accuracy that can only be obtained through experience such as above mentioned, and by methods which many professing to understand know comparatively little about. Analysis of ores, minerals, &c., is done by *fire only*. Messrs. Waters' card will be found in another column. Their place of business is at No. 57 Vesey street, this city.

ECONOMY AND CONVENIENCE COMBINED.—The CARRIER INSECT SHIELD MANUFACTURING COMPANY, 18 Park Place, New York, manufacture Portable Insect Shields, Mosquito Bars, &c., for use on Beds, Cribs, Soldiers' Bunks, Steamboat Berths, Tables, &c., of the following sizes: 40x25, 48x36, 72x54 inches. As a Mosquito Bar and for protection against Flies, they are superior to all others. An invaluable appurtenance to the sick room and the nursery, being adapted to Beds, Cribs or Cradles, without fixtures or support, and removable without trouble or inconvenience. As a cover for Meats, Fruits, Vegetables, &c., on tables, it is admirably adapted, and should be found in Every House, Hotel and Restaurant where Flies are a source of annoyance.

Nets for the Southern, West Indian and South American trade are made of a material of close texture, such as is ordinarily used as a protection against Flies and other small insects. The attention of Tourists and Travellers generally is invited to them, as, aside from their comparatively perfect protection from insects of all kinds, they can be folded up and packed, without danger or injury, in an ordinary carpet bag, and are ready for use at all times and in all places, without adjustment or trouble.

Orders may be addressed as above to W. T. WHITMORE, Agent.
☞ Agents wanted for the South and West. 4.5tf

THE EUREKA BRICK MACHINE

IS ADMITTED BY EVERY BRICKMAKER WHO HAS SEEN IT TO BE THE simplest, most powerful, and every way the most desirable Clay Tempering machine in America. With only

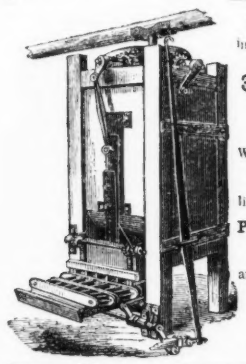
ONE PAIR OF HORSES AND NINE HANDS,

it will make 3,000 GOOD BRICKS PER HOUR;
and with steam power, 4,320 PER HOUR.

It has no complex machinery to be continually getting out of order and breaking down, and does not require skilled laborers to run it. We have also a Re-pressing Brick Machine for making Philadelphia front bricks, and one man and one boy can re-press 4,000 per day. We have also the best Hay Fork in the world. The Empire Shingle machine is the best Shingle machine in use.

ABRAM REQUA, General Agent for United States,
23:2:9p 141 Broadway, N. Y.

IMPROVED BRICK MACHINE.



This Machine, combining entirely new improvements, makes from

3,000 to 3,500 BRICKS PER HOUR,

WITH EIGHT MEN AND TWO HORSES.

Strong, simple and durable, and not likely to get out of order.

Price of Machine.....$600.

Molds and trucks extra. Manufactured and for sale by

MARTIN BROTHERS,
Box 282, Jersey City, N. J.
5:4:9p

GREAT PRIZE KILN.

HOFFMAN'S PATENT CIRCULAR BRICK KILN,

With perpetual operation, received, as it did at the International Exhibition in London, 1862, also at the late Exposition in Paris, one of the great Prizes. Only sixty-four in all of these Prizes were distributed, and the Inventor had the honor of receiving said Prize from the hands of the Emperor Napoleon.

In this Kiln is going on at the same time and without interruption, the BURNING READY, the GRADUAL COOLING, the GRADUAL HEATING, the SETTING of fresh and the TAKING OUT of burned and sufficiently cooled bricks, lime, cement, etc., and the FIRES ARE SUPPLIED WITH RED-HOT ATMOSPHERIC AIR to support the combustion.

By the use of this Kiln two-thirds of the fuel is saved, the bricks are burnt better and much more uniform, labor is saved in working it, and any kind of fuel, as wood, coal, peat, small coal, etc., may be used. For particulars apply to 8:4:6t G. L. DETHLEFS, 213 East Broadway.

COAL.

PACKER, HEALY & CO.,

SUCCESSORS TO DANIEL PACKER AND CO.,
MINERS AND SHIPPERS OF
ANTHRACITE AND BITUMINOUS COAL,
20 Nassau Street, corner Pine Street, New York. Philadelphia, 203 Walnut Street. BOSTON, 29 Kilby Street 3:2:qp:q

ENGLISH COAL AND CANNEL.
DESPARD COAL, from Baltimore,
PROVINCIAL COAL,
ANTHRACITE COAL,
For Sale in Lots to suit.

PARMELE BROS.,
AGENCY OF GEORGE WRIGHT & CO., LIVERPOOL,
Office, No. 32 PINE STREET, NEW YORK.
31:qp:q Yard, West 22d Street, near 10th Avenue.

WILKESBARRE COAL,
DELIVERED DIRECT FROM THE MINES OF THE
Wilkesbarre Coal and Iron Company,
OR FOR RESHIPMENT AT
Elizabethport and Jersey City
OFFICE—No. 16 WALL STREET, NEW YORK.
3:3 xm

HECKSCHER, BOWNS & CO.,
NO. 111 BROADWAY,
ROOM 79 (TRINITY BUILDING), NEW YORK.
Offer for sale the following Coals at the lowest market rates:
GLENDON COAL COMPANY'S
BUCK RIDGE, SHAMOKIN,
BLACK DIAMOND VEIN, RED ASH.
LOCUST MOUNTAIN, WHITE ASH.
Agents for the celebrated "Hartford Co. Coal." vol2 5 qp

JOHN WHITE & CO., SHIPPERS OF
McNeal, Wilkesbarre and Lehigh Coal,
FOR STEAM AND FAMILY USE.
OFFICE,
Room No. 75, 111 Broadway, (Trinity Building, Broadway, N. Y.
JNO. WHITE. 3:1:qp:q LOUIS T. SNOW.

A. T. STOUT & CO.,
MINERS AND SHIPPERS OF
"FULTON" AND "STOUT" LEHIGH COALS,
FULTON LUMP,
(Especially adapted for smelting Iron.)
ROOMS, 44 & 46 TRINITY BUILDING, NEW YORK.
A. T. STOUT. S. VAN WICKLE, G. LEE STOUT.
1:3.60

REPPLIER, FREEMAN & CO.,
MINERS AND SHIPPERS OF
REPPLIER'S LOCUST MOUNTAIN, DUNCAN RED ASH,
AND
CUMBERLAND COALS.
WHARF, NORTH EIGHTH STREET, WILLIAMSBURG.
Office, - - - - - - 111 Broadway, New York.
1:3.qp

HONEY BROOK COAL COMPANY
Exclusive Miners and Shippers of the Celebrated
HONEY BROOK LEHIGH COAL,
NO. 113 BROADWAY, NEW YORK.
JAS. H. LYLES, Agent.
Wharves, Port Johnston, N. J. Philadelphia Office, 209 Walnut street.
3:6:qp:q **J. B. McCREARY, President.**

C. E. DETMOLD,
MINER AND SHIPPER OF
SPRING MOUNTAIN AND HONEY BROOK LEHIGH COALS.
ALSO,
GEORGE'S CREEK COALS.
ROOMS 40 & 42 TRINITY BUILDING, 111 BROADWAY, N. Y. 1:3xm

ASHBURTON COAL CO.,
MINERS AND SHIPPERS OF
LEHIGH COAL,
Delivered direct from the mines, or for reshipment at Port Johnston.
LOUIS J. BELLONI, Jr., Pres't.
2:4:qp OFFICE, No. 41 PINE STREET, NEW YORK.

MILES R. MARTIN,
SUCCESSOR TO
HOWELL, MARTIN & CO.,
Wholesale Dealer in
LEHIGH, LOCUST MOUNTAIN, SHAMOKIN, RED ASH, LORBERRY, AND SCRANTON COALS.
1:3:qp:q **Room 21 Trinity Building, 111 Broadway, New York**

RANDOLPH BROTHERS,
SOLE AGENTS OF THE ORIGINAL
SPRING MOUNTAIN LEHIGH COAL,
Extensively Used for Smelting Iron.
ROOMS, 28 AND 30 TRINITY BUILDING, NEW YORK 3:2:qp:q

DAY, HUDDELL & CO.,
MINERS AND SHIPPERS OF
HARLEIGH LEHIGH COAL,
And the Celebrated
HICKORY, BROAD MOUNTAIN, EXCELSIOR, SHAMOKIN AND NEW ENGLAND RED ASH.
OFFICES:
Room 51, TRINITY BUILDING, 111 Broadway.
Philadelphia. 109 WALNUT STREET. **Boston.** 7 FOANE STREET.
3:4:px

CRANE & FASSITT,
SHIPPERS AND DEALERS
IN
ANTHRACITE AND BITUMINOUS COAL.
NEWBURGH—ORRELL AND OTHER SUPERIOR GAS COALS.
OFFICES:
NEW YORK, 113 BROADWAY. BOSTON, 1 CENTRAL WHARF.
PHILADELPHIA: 216 WALNUT STREET. PROVIDENCE, R. I.: 10 SOUTH WATER STREET.
3:4:qp:q

LEWIS AUDENRIED & CO.,
Miners and Shippers of
CELEBRATED ANTHRACITE COALS,
Diamond Vein and Locust Mountain.
FROM PHILADELPHIA AND THE MINES, ELIZABETHPORT AND JERSEY CITY.
Also, superior CUMBERLAND COALS.
205 Walnut street, PHILA. 14 Kilby street, BOSTON.
20 Westminster street, PROV. 24 Second street, BALTIMORE.
27:tf 110 BROADWAY, NEW YORK.

SAMUEL BONNELL, JR.,
OFFERS FOR SALE
SUGAR CREEK
LEHIGH COAL,
Delivered on board vessels at Pier No. 4, Elizabethport, N. J.
Office, 43 & 45 Trinity Building, 111 Broadway N. Y. 1:3:qp:q

CALDWELL, GORDON & CO.,
WHOLESALE DEALERS IN
ANTHRACITE AND BITUMINOUS COAL.
HENRY HEIL'S
CELEBRATED EAST FRANKLIN COAL,
Room 35 Trinity Building,
NO. 111 BROADWAY, NEW YORK.
S. CALDWELL, JR. F. A. HALL. N. P. GORDON. S. B. YOUNG
BOSTON, Office 144 State St. PHILADELPHIA, 112 Walnut St.
3:2:qp:q

53D AUCTION SALE.
75,000 TONS
SCRANTON COAL,
ON WEDNESDAY, AUGUST 28TH, 1867.
NEW YORK, August 17, 1867.

The DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY will sell, by Messrs. JOHN H. DRAPER & CO., Auctioneers, at the Company's salesroom, No. 26 EXCHANGE PLACE, corner of William street, New York, on Wednesday, August 28th, inst., at 12 o'clock, noon,

75,000 TONS
OF
FRESH MINED COAL, FROM THE LACKAWANNA REGIONS,

of the usual sizes, deliverable at their Depot, Elizabethport, N. J, during the month of September, 1867.

Also, at the same time and place,

10,000 TONS,

deliverable at Washington, New Jersey.

TERMS: Fifty cents per ton, payable in current funds on the day of sale, and the balance within ten days thereafter, if required, at the office of the Company. 8:4:1t JOHN BRISBIN, President.

ARION PIANO-FORTE.—PATENTED.

Pre-eminently the best Piano ever constructed, unrivalled for tone, durability and elegance of finish. The Brooklyn Daily Times says: "It has in higher degree than any Piano that we have met with, the singing quality or character that musicians so much admire and seek for in a Piano; the bass notes reminding you of the deep-toned notes of a large organ. The middle octaves are more elastic and clear than in most other Pianos, while the upper or treble notes possess that pure, distinct, bell-like clearness that is so necessary to the correct rendering of difficult pieces of music, and that also lends such a charm to melody." Professor J. M. Abbott, organist of the Church of Our Saviour, in Brooklyn, says: "For elasticity of touch, for the singing quality so much sought for by artists, and for richness and purity of tone, it is unexcelled by any Piano I have ever used." Professor John W. Henry Canoll, editor of the American Educational Monthly, says: "* * *" Listen, however, to one of another class, for example, one of the Arion Pianos, made by Manner & Co.; bow your head as the bass sends forth its riches, clear and unblurred; observe the singing, swelling melody that in its middle octaves so wondrously represents vocal expression, and which predominates above even the silvery brilliancy of the upper treble; then reflect that this is a scientifically constructed and durable instrument." * * *

Is for sale at the Manufactory and Warerooms, 187 and 189 Bowery, second door above Delancey street. MANNER & CO.

N. B.—We have a number of Second Hand Pianos to sell or rent. 12-v:2qp

FOR SALE.

A PARTLY DEVELOPED SLATE QUARRY FOR sale or lease in Georgia. Within twenty miles of Rome, Georgia, there is a magnificent SLATE QUARRY, partly developed, standing two hundred feet above the ground, comprising forty Acres, just taking in the highest point of the Mountain, which is positively a solid mass of inexhaustible Slate of the finest kind. This property is now being worked in a small way by five or six Welchmen, who made for the proprietors last year over $5,000. Slate from this Quarry is now laid down in Louisville, Ky., for about $8 60 per square, where it is worth $15. It is now being sold at the Quarry for $12.

The Quarry is situated on a creek capable of being made serviceable for Mills or Factories for manufacturing the Slate into Billiard Beds, Mantels, etc., etc., for which there is a ready market. Title perfect.

These particulars may be relied on as being strictly true. Further information, terms, etc., may be obtained by addressing B. F. J., care office JOURNAL OF MINING, 37 Park Row, New York, where a photograph of the property may be seen. 4:6:tf

VALUABLE SLATE PROPERTY FOR SALE.

In pursuance of an order of the Court of Common Pleas of Lehigh County, Pa., under proceedings in partition, the undersigned will sell on Wednesday, the 21st day of August, inst., at 10 o'clock, A. M., at the American Hotel in Allentown, certain Real Estate known as THE LYNNPORT SLATE QUARRIES, consisting of about twenty-nine Acres of Land, in which there are in full working order two of the most valuable Slate Quarries in Pennsylvania, with a large and well arranged manufactory for the preparation of the beautiful enameled Slate Mantels, Table and Bureau Tops, Billiard Beds, School and Roofing Slate. There is a dwelling house and other valuable buildings on the premises. The land is well timbered, and part of it in a high state of cultivation. The property is but a short distance from the post road, which is in constant communication with New York and Philadelphia. This is a very valuable property, and highly worthy the attention of capitalists.

ALLENTOWN, PA., August 1, 1867. 6:2t JACOB HOLBEN.

FOR SALE—VALUABLE PEAT LAND, THREE AND A HALF MILES FROM NEW YORK CITY.—The advertiser has for sale Fourteen Acres of Good Peat Land, three and a half miles from New York City, situated near Middle Village, Long Island. A railroad, now in course of construction, has cut off one corner of this property—offering great facilities for transportation.

The Peat has been found to extend to a depth of thirty feet, and of excellent quality. It will be sold at a low figure. Address,

ROLT. F. HULL,
58 Vesey street, N. Y City.
Call between 8 and 10 A.M., and 3 and 5 P.M. 10 5:ps

SLATE.

JOHN GALT,
WHOLESALE DEALER IN ROOFING SLATE.
SOLE AGENT FOR THE
EAGLE SLATE COMPANY OF VERMONT,
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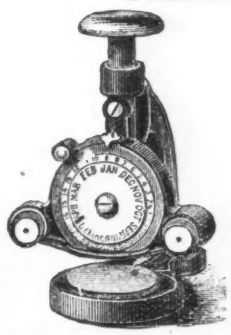

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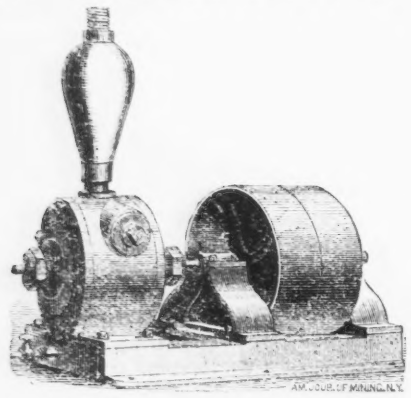

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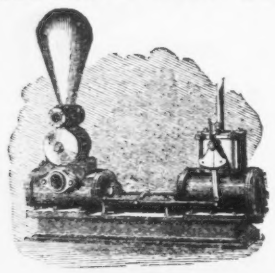

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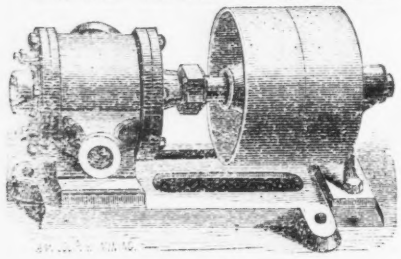

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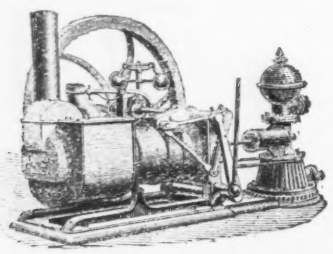

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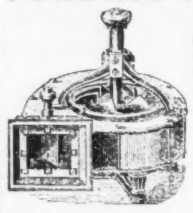

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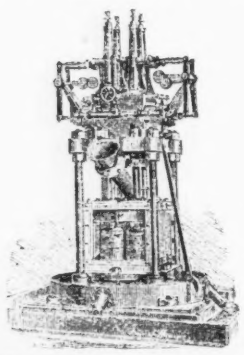

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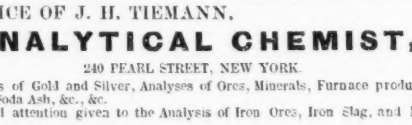

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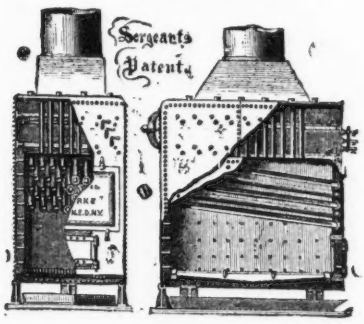

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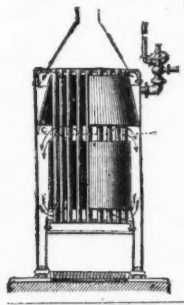

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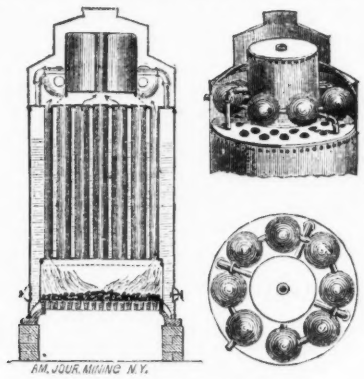

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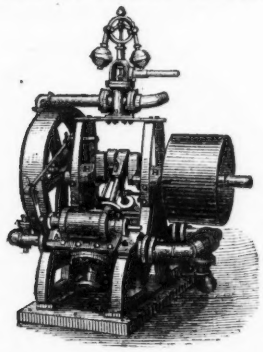

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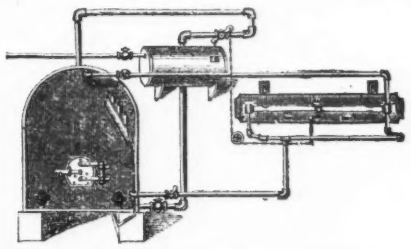

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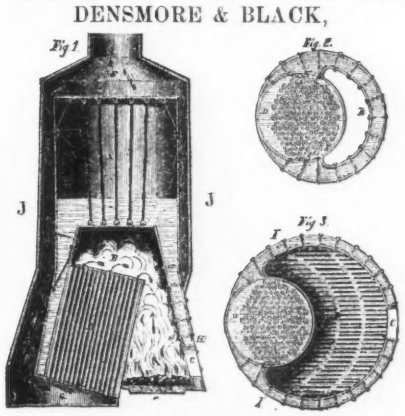

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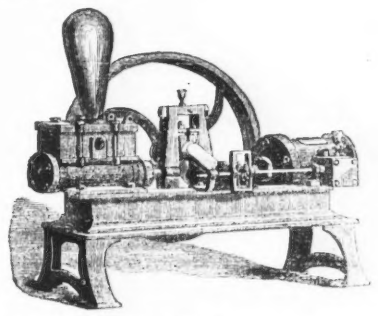

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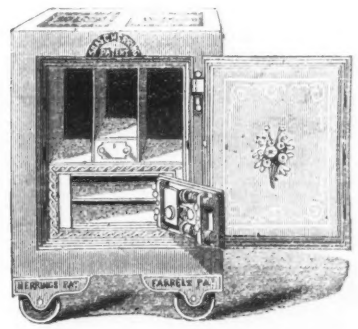

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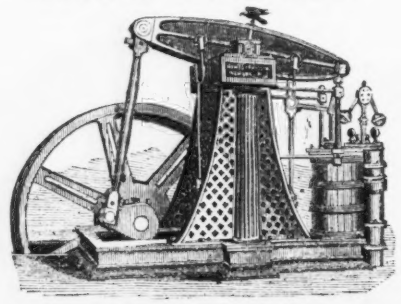

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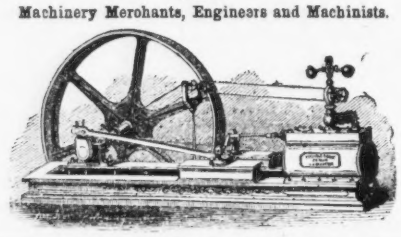

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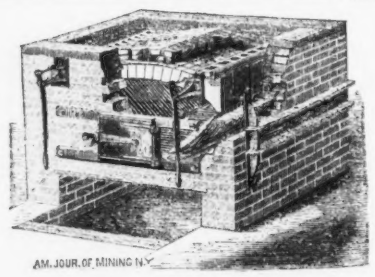

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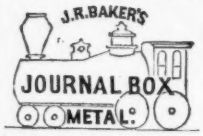

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